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ABSTRACT

The purpose of this study was to determine how accessible private and corporate grant-making foundations were to private institutions of higher education. Tax returns for 1975 were examined from 312 foundations, and a total of 2,878 grants to institutions of higher education amounting to $126,920,000 was identified. Private institutions of higher education were divided into five types: research, doctoral, comprehensive, liberal arts, and two-year. In addition, separate classifications were made of public and predominantly black institutions. Grants were analyzed by these distinguishing characteristics of foundations: type; total dollar amount of grants awarded; asset size; categories of aid supported; geographic orientation; and geographic location. Results showed foundations were not equally accessible to each type of institution, either in dollar amounts or number of grants awarded. Private research universities received the largest foundation dollar support, while private two-year colleges received the smallest average grants. Based on data from these analyses, a set of variables was obtained that higher education institutions could use to measure their potential success in obtaining funding from foundations: that is, an index of accessibility. (Author/MSE)

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ACCESSIBILITY OF PRIVATE, GRANT-MAKING FOUNDATIONS TO PRIVATE INSTITUTIONS OF HIGHER EDUCATION

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A Dissertation Submitted in Partial Fulfillment
of The Requirements for the Degree of
Doctor of Philosophy

WALDEN UNIVERSITY

April 1979

HE 011 333

ⓒ 1979 Helen Judith Jarrell

ABSTRACT

The purpose of this study was to determine how accessible private and corporate grant-making foundations were to private institutions of higher education. Foundation 1975 tax returns were examined for 312 foundations and a total of 2,878 grants to institutions of higher education amounting to $126,920,000 was identified. Private institutions of higher education were divided into five types: research, doctoral, comprehensive, liberal arts, and two-year. In addition, separate classifications were made of public and predominantly black institutions.

Grants to the various types of institutions were analyzed in relation to the following distinguishing characteristics of foundations: 1) type, 2) total dollar amount of grants awarded, 3) asset size, 4) categories of aid supported, 5) geographical orientation, and 6) geographical location.

Analyses of these relationships by types of institutions included: 1) number of foundations which gave one or more grants, 2) total foundation dollar amount of grants awarded, and 3) total number of foundation grants awarded.

Results showed foundations were not equally accessible to each type of institution. Both the average dollar amount of grants and the number of grants given by foundations were unequally distributed among types of institutions in

relation to each of the foundation's distinguishing characteristics even though certain types of institutions received one or more grants from a relatively equal proportion of foundations. Private research universities received the largest foundation dollar support while private two-year colleges received the smallest average grants. Private doctoral and two-year institutions received a low proportion of the total number of grants awarded whereas public institutions and private research universities often received a relatively high proportion of the total number of grants awarded.

Based on data from these analyses, a set of variables was obtained which institutions of higher education could use to measure their potential success in obtaining funding from foundations; i.e., an index of accessibility.

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INTRODUCTION

Private, non-profit foundations are an important source of flexible purpose current fund revenue for private institutions of higher education. In 1977 private foundations donated an estimated $558 million to institutions of higher education, most of which went to private institutions. (15:4.) While foundations cannot be relied upon as a source of continuing support, they are important as a source of special purpose and non-categorical aid. It is anticipated that due to current financial pressures on institutions of higher education, foundations can expect to receive an increasing number of proposals for funding from colleges and universities. However, while private foundations are an important source of revenue to higher education, they often are considered as inaccessible to many institutions of higher education which have applied to foundations for financial assistance.

The purpose of this study was to determine how accessible private, grant-making foundations were to private institutions of higher education. While the major thrust of this study was directed toward private institutions, grants made to public institutions also were recorded. It was hypothesized that certain variables were significantly related to grants received by different types of institutions

of higher education. Grant records of foundations were studied. Analysis of variance and chi-square statistical methods were used to examine relationships between grants received by institutions of higher education and the hypothesized related variables. Results were then combined into a set of variables institutions could use to measure their potential success in obtaining funding from foundations; i.e., an index of accessibility.

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CHAPTER I

THE PROBLEM AND THE STUDY

The Problem

Problem Statement

Private, grant-making foundations are an important source of revenue to higher education and yet often are considered as inaccessible by many institutions of higher education which have applied to foundations for financial assistance.

Background of the Problem

Private, nonprofit foundations are an important source of flexible purpose current fund revenue for institutions of higher education. In 1977 private, nonprofit foundations donated an estimated $558 million to institutions of higher education, which amounted to 21 percent of the total voluntary support of higher education. (15:4.) In 1976 private gifts and grants, of which over a fifth were from foundations, were 10.1 percent of the current fund income of private institutions of higher education, while endowment earnings were 4.6 percent of their current fund income. (56:126.) Earnings from endowments are often considered as income from the total private contribution since endowments represent private gifts and grants given in the past to an institution. (11:472, 44:121.)

Foundations, a major philanthropic source of income to higher education, have a great flexibility in making grants and in determining the purposes of awarded grants, which gives foundations a special potential for responding to specific institutional needs. While federal support is, for the most part, categorical, private philanthropy is a source of non-categorical funds. Philanthropy is independent of government budget decisions and of fluctuations in enrollment and often provides an element of diversity in an institution's portfolio. (6:97.) The private philanthropy role is that of innovator, developer, and sustainer of diversity in the private sector. Cheit and Lobman reported the most consistent difference between philanthropic and federal support was that the former has been primarily concerned with the sustenance of institutions while the latter usually has been concerned with the institutions as they relate to specific national purposes. (11:471.)

From 1973 through 1975 the Commission on Private Philanthropy and Public Needs (commonly known as the Filer Commission after its Chairman, John H. Filer) sponsored ninety-one individual research studies on nearly every aspect of private philanthropy and public needs. Jenny and Allen's report to the Filer Commission concluded that higher education's financial condition would have deteriorated more seriously had it not been for the strength and consistency of private philanthropy to higher education. (36:552.)

Although they donated an estimated $1,807,736,000 in 1974-76, (25:xi.) foundations often have been criticized as being inaccessible to many types of applicants. For example, the Chairman and Staff of the Council on Foundations wrote:

> Ready entree (sic) for less-privileged groups to the beneficience of foundations and other forms of private philanthropy is a genuine problem and one not readily resolved....
>
> To decide for themselves where and how they will place their support among all the many competing interests and opportunities which have just claims for assistance is a proper prerogative of foundations. Unquestionably, however, in most cases gaining foundation support is harder for the less sophisticated and less articulate than it is either for traditional "upper-class" institutions or for minority agencies which have developed promotional skills and a track record over a period of time. (9:1586.)

So many myths and folktales abound regarding foundation funding that they have interfered with accurate information. (62:128.) Those seeking foundation funds are told that if they carefully research and find foundations whose interests mesh with theirs, they have an increased chance of receiving funding from foundations. (39:1.) They send their carefully researched proposals to appropriate foundations only to find the foundations often do not answer their mail or, if they do, may take months before acknowledging the grant requests. Worse yet, the request may be turned down and the proposal sent back by return mail indicating it actually was not read by the foundation. For example, when the Grantsmanship Center, a nonprofit, educational institution, requested information for its library from the 5,454 foundations listed in the Foundation Directory, edition four, 113 foundations replied by refusing a request for funds, which indicates they had not carefully read the letter sent by the Grantsmanship Center. (1:19-20.) A total of 4,264 foundations (77.6 percent) did not respond at all. Only 532 foundations replied with responses that contained some useful information. (1:15.)

This inaccessibility has been reported by others simply requesting information from foundations. The Foundation Center, a private, nonprofit organization with the purpose of collecting, analyzing, and reporting data and information on the activities and interests of foundations, requested information from the 2,818 foundations qualifying for inclusion in the sixth edition of the Center's Foundation Directory. Replies with all or part of the requested information were received from 68 percent of the foundations. Therefore, 32 percent, or nine hundred foundations, did not reply at all. The Foundation Center concluded that this rate of reply was generally indicative of the incidence and quality of responses that grant applicants may expect. (25:xiv-xv.) With foundations unresponsive to simple requests for information, it is no wonder applicants for funds are confused as they seek to match their needs to foundation objectives and priorities.

Foundations can expect to receive an increased number of proposals for funding in the future from institutions of higher education. Due to both current financial pressures and current and predicted reductions in student enrollment, private American institutions of higher education are in serious jeopardy in terms of institutional quality and survival during the next several years. While their financial condition at the time of this study looks poor, the outlook for many institutions in the near future looks even grimmer. (42:98-99; 109-111.)

During the late 1950's through the late 1960's, all institutions of higher education experienced a tremendous period of enrollment growth and robust financial health. However, beginning in the late 1960's the financial health of many of these institutions, particularly in the private sector, began to deteriorate. This was due in large measure to a sharp reduction, and in some instances actual decline, in the rate of enrollment increase accompanied by equally sharp increases in cost. The Filer Commission in relating these conditions to private higher education came to the following conclusion:

> The severest deterioration of all among institutions of higher learning has been suffered by the private liberal arts college, so much so that, according to one Commission report, "to talk of the liberal arts college's disappearance...is not to indulge in idle speculation." Indeed, around 150 private colleges have already disappeared, shut down since 1969. (14:80.)

There has been general concurrence with this opinion. M. J. Rossant, Director of the Twentieth Century Fund, stated, "Many informed people seriously question the ability of private institutions of higher education to survive." (55:vii.) Joseph Duffey described the situation of colleges and universities by saying:

> Most of these institutions are now confronted with serious threats to their quality and their very survival. Educational costs are rising more sharply than the general price index, hard-hit state governments are curbing their budgets, and the sources of funds for private giving have been devistated by the economic slump. Accordingly, colleges and universities throughout the nation are cutting back services and staff, increasing tuition fees, and deferring plant maintenance. (22:1.)

Since 1955 the American Association of Fund-Raising Counsel has published an annual report, Giving USA, which is a compilation of facts and trends in American philanthropy for each year. Up through 1972 it could report regarding higher education that, "More institutions are finding it possible to balance their budgets in part through increased support, higher tuition charges, and cutbacks in some areas." (3:7.) After 1973 the reports often contained warnings regarding the financial situation of higher education such as that included in the 1976 report:

> Inflated costs for operation and basic items are bringing real financial problems for the current school year.... Slightly increased enrollments for the colleges and universities have helped but with steep rises in tuition since 1970 more funds are needed for scholarship and other student aid. (2:7.)

Because of the financial pressures of higher education, it can be anticipated that an increasing number of institutions will turn to foundations for support. However, at the time of this study knowledge of accessibility of foundations to institutions of higher education was limited. What few studies were available had concentrated on grant patterns of large foundations or of foundations in specific geographical locations or had been directed to highly specific areas. While foundation giving had reached over half a billion dollars a year to higher education, it was not known what the effect had been on foundation accessibility to different types of institutions of such variables as: 1) type of foundation, 2) foundation asset size, 3) total grants made by a foundation, 4) grant purpose or categories of support, 5) geographical orientation, and 6) regional location of the grant-making foundation. It was not known if these variables affected foundation accessibility to higher education or if foundation support was equally accessible to all types of institutions of higher education such as research institutions, doctoral granting institutions, liberal arts colleges, two-year institutions, and professional and specialized schools.

The Study

Purpose

The purpose of this study was to determine how accessible private, American, grant-making foundations are to private, American institutions of higher education. In particular, the purpose of this study was to find answers to questions these colleges and universities need to know before determining what foundations they wish to apply to for grants or even if they should apply at all to foundations for institutional support. The results were a set of variables institutions could use to measure their potential success in obtaining funding from foundations; i.e., an index of accessibility.

Nature of Study

The resources of the Foundation Center library were used to examine the grant-making records of foundations to institutions of higher education in order to ascertain what variables were significantly related to the grant-making patterns of foundations. Analysis of variance and chi-square statistical methods were used to examine relationships between grants received by institutions of higher education and the identified variables.

Assumptions

1. Many institutions of higher education had little understanding of the procedures to be followed in applying for foundation funding.
2. Various types of institutions of higher education had applied to a wide range of foundations for funds.
3. There were many misunderstandings among institutions of higher education regarding ways of obtaining foundation funding.
4. Foundations had complied with the 1969 Tax Reform Law and had filed the required 990 tax forms which were the source of data for this study.
5. Accessibility of foundations to institutions of higher education would be facilitated by increasing the body of available knowledge regarding grant-making patterns of foundations.

Hypotheses

Introduction

Accessibility was defined as grants made to institutions of higher education. If a foundation made a grant to an institution of higher education the foundation was defined as accessible to that type of institution. The concept of accessibility was broken down into the hypotheses listed below. Each hypothesis is followed by specific questions related to that hypothesis. Type of institution means an institution classified into a category according to the Carnegie Commission Classification System of Colleges and Universities. Grants received means either the number of grants or the dollar amount of grants received by institutions of higher education.

Hypothesis 1

There is a significant difference in types of institutions of higher education receiving grants from grant-making foundations.

A. Were foundation grants made to all types of institutions?

B. Were foundations equally accessible to all types of institutions of higher education?

C. Did certain types of higher education institutions receive different proportions of foundation support?

Hypothesis 2

There is a significant difference in grants received by types of institutions of higher education and type of grant-making foundation.

A. Were grants made from all types of foundations to all types of institutions of higher education?

B. Were different types of foundations equally accessible to all types of institutions of higher education?

C. Did different types of foundations distribute grants equally to all types of institutions of higher education?

D. Was there a specific type of grant-making foundation that a specific type of institution of higher education should apply to for grants in preference to other types of foundations?

Hypothesis 3

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and foundation annual total grants awarded; i.e., the total amount of grants paid in the year of record by a foundation.

A. Were foundations, when stratified by total dollar amount of grants awarded, equally accessible to all types of institutions of higher education?

B. Was there a difference in funding patterns of higher education by foundations when compared by size of grants to types of institutions from foundations which have been stratified by total annual grants awarded?

C. Was there a specific foundation total annual grants range that different types of institutions should apply to for grants in preference to foundations with other total grants sizes?

Hypothesis 4

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and foundation asset size.

A. Were foundations of different asset sizes equally accessible to all types of institutions of higher education?

B. Was there a difference in funding patterns of higher education by foundations when compared by foundation asset size?

C. Was there a specific asset size range of foundations that different types of institutions should apply to for grants in preference to foundations with other asset sizes?

Hypothesis 5

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and grant purposes or categories of aid supported by grant-making foundations.

A. Was accessibility of foundations to different types of institutions of higher education related to types of categories of aid supported by foundations?

B. What categories of aid to higher education were most likely to be funded by foundations?

C. Was there a difference in foundation funding patterns of categories of aid to types of institutions?

D. Was there a specific type of category of aid certain types of institutions were most likely to find supported by foundations?

Hypothesis 6

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and the geographical orientation of foundations; i.e., whether the foundations made grants on a local, regional, or national basis.

A. Was accessibility of foundations to institutions of higher education related to the geographical orientation of foundations?

B. Did the geographical orientation of foundations have an impact on grants to different types of institutions of higher education?

C. Was there a specific foundation geographical orientation that certain types of institutions of higher education were most likely to find supported by foundations?

Hypothesis 7

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and the geographical location of foundations.

A. Was accessibility of foundations to institutions of higher education related to the geographical location of foundations?

B. Did the geographical location of foundations have an impact on grants to different types of institutions of higher education?

C. Was there a specific foundation geographical location in which certain types of institutions of higher education were most likely to find foundation support?

Importance of the Study

With the increasingly poor financial condition of private higher education, it could be expected that many private institutions of higher education would look for additional sources of financial support. Foundations consistently have been a source of financial support to higher education but often have been criticized as inaccessible to many institutions which have applied to foundations for financial assistance.

Existing knowledge of foundations has been limited, and institutions often have not known where to start in applying for foundation funds. If a set of variables were identified which institutions of higher education could use to measure their potential success in obtaining funding from foundations, institutions would be able to determine how likely a particular foundation would be accessible to them as a source of funds or whether they should look elsewhere for needed financial support.

Use of such variables by institutions of higher education could also prevent foundations from being inundated with inappropriate requests and perhaps facilitate the grant-making process for both foundations and applicants.

Definitions of Terms

Accessibility. Accessibility of foundations was determined by the grant-making records of each foundation to an individual institution of higher education. If a foundation had funded a particular institution, it was categorized as accessible to that type of institution.

Carnegie Commission Classification System of Colleges and Universities. A classification scheme of colleges and universities developed by the Carnegie Commission in which institutions of higher education are classified into five main and eighteen subcategories based on several criteria such as enrollment size, curriculum, federal financial support received, and number of graduates who later received doctorates. Appendix I contains a summary of the categories which were used in this study.

Community Foundation. A foundation with the following special characteristics:

1. Classification by the Internal Revenue Service not as private foundations but as "public charities"
2. Funds derived from many donors rather than a single source as is usually the case with private foundations
3. Grant programs directed toward the immediate locality or region
4. The governing board broadly representative of the community served
5. Tax-deductible gifts to community foundations subject to fewer limitations and regulations applicable to private foundations. (25:x.)

Corporate or Company-Sponsored Foundation. A private foundation deriving its funds from a profit-making company or corporation but independently constituted to make grants, usually on a broad basis. (25:x.)

Current Fund Revenues. Those revenues to institutions of higher education which include all unrestricted gifts and other unrestricted revenues earned during the fiscal year as well as restricted current funds to the extent that such funds were expended for current operating purposes.

Family Foundation. A private, grant-making foundation deriving its money from a family fortune and which is still under the voluntary direction of family members.

General Purpose Foundation. A foundation supporting a wide variety of programs through its program of grants.

Grant Record. A full description of a foundation grant with foundation name and location, amount authorized, recipient name, and often grant purpose.

Higher Education Institutions. All accredited, degree-granting, nonprofit, post-secondary educational institutions in the United States.

Index of Accessibility. A chart, organized by the independent variables included in this study, showing by types of institutions of higher education: 1) the percent of foundations making one or more grant to each type of institution, 2) the percent of the total grant dollars received by each type of institution, 3) the percent of the total number of grants received by each type of institution, and

4) the average dollar amount of grants received by each type of institution. The independent variables were: 1) type of foundation, 2) foundation asset size, 3) dollar amount of total foundation grants, 4) grant purpose or categories of support, 5) geographical orientation of foundations, and 6) regional location of the grant-making foundations.

Internal Revenue Service (IRS) Private Foundation Returns: Forms 990-AR and 990-PF. Information returns which private foundations are required to file each year with the Internal Revenue Service.

1. Form 990-PF. IRS form providing fiscal details on receipts and expenditures, compensation of officers, trustees, or directors, capital gains or losses, and other financial matters pertaining to the foundation.
2. Form 990-AR. IRS form providing information on foundation managers, assets, grants paid and/or committed for future payment.

Local Foundation. A foundation restricting its giving to a specific metropolitan area or state.

National Foundation. A foundation dispersing grants widely throughout the United States.

Philanthropic Foundations. Nongovernmental, nonprofit organizations, with funds managed by their own trustees or directors, and established to maintain or aid social, educational, charitable, religious, or other activities serving the common welfare, primarily through the making of grants. (25:ix.)

Private Grant-Making Foundation. A fund or endowment designated by the Internal Revenue Service as a private foundation under the tax law and having the primary function of making grants. (25:x.)

Private Operating Foundation. A fund or endowment designated by the Internal Revenue Service as a private foundation under the tax law and having the primary purpose of operating programs determined by its governing body. (25:x.)

Regional Foundation. A foundation restricting its giving to specific regions of the United States encompassing more than one state.

Special Purpose Foundation. A foundation supporting only specific projects or having program limitations.

Scope and Limits of Study

1. The major thrust of this study was directed toward private, nonprofit institutions of higher education since foundations were a more important source of funds for private as opposed to public institutions. However, grants made to public institutions also were included. Institutions from the major categories of the Carnegie Classification System were included with the exception of Specialized Institutions. This group contained such a diverse range of institutions that obtained relationships with the variables of this study would have been too broad to be analyzed for the purposes of this report.

2. The information included in this study represented a sampling of 2,818 foundations contained in the sixth edition Foundation Directory since these foundations represented an estimated 83 percent of foundation dollars paid out for charitable purposes.
3. This study was limited to grant information provided by foundation IRS 990 tax returns from private, grant-making foundations with the subcategory of company-sponsored foundations. Excluded were community foundations and private operating foundations. Because it was impossible to identify family foundations accurately from grant records alone, family foundations were not a subcategory of this study.
4. This study was limited to grants made to institutions. Excluded were grants made to individuals at institutions.

Organization of the Dissertation

This dissertation reports the results of a study of accessibility of private, grant-making foundations to types of institutions of higher education. The dissertation provides: 1) a discussion of the background and framework of the study, 2) a discussion of the methods used to conduct the study and select the sample foundations whose grant records were analyzed, 3) a report of the research findings, and 4) a statement of conclusions, implications, and recommendations drawn from the research findings.

CHAPTER II

BACKGROUND AND FRAMEWORK OF STUDY

Introduction

At the time of this study, available knowledge of grant-making patterns of foundations was either in very broad terms or in very specific terms. Specific foundations could be analyzed individually by consulting their tax forms. Studies had been done on specific foundations, foundations in specific locations, or of the magnitude of foundation support in particular fields of higher education. Broad analyses were available from the Foundation Center in terms of aggregate foundation grants, assets, and the geographic location of foundations. General amounts given by foundations to institutions of higher education were available from the Council for the Financial Aid to Education (CFAE). What was unknown was whether there were specific grant patterns that could be applied from foundations in general to specific types of institutions, such as institutions of higher education, that would facilitate understanding of the accessibility of grant-making foundations to individual institutions and organizations.

One reason little was known about specific grant patterns of foundations in relation to institutions of higher education was because there had been few research studies of foundations. As Howe pointed out:

> Although numerous critical publications have recently supplemented the literature previously written almost exclusively by philanthropists and philanthropoids, it is evident to serious investigators that an unusually small amount of scholarly research has been devoted to explanations of the modern philanthropic foundation as an economic, political or sociological phenomenon. (33:1-2.)

Rossant also discussed the fact that there had been comparatively little independent research on foundations in the United States. He felt this was because foundations have been a frequent source of financial support for research and therefore scholars have been somewhat reluctant to subject them to scrutiny. In addition, foundations have been reluctant to fund independent examinations of their roles and impact. Rossant felt analysis of foundations was needed because foundations have been a significant institution in the United States and because analysis would yield knowledge and understanding, without which there would be a danger of uninformed criticism or increased government control and regulation. (46:vii.)

Until passage of the Tax Reform Act of 1969, information on grants made by individual foundations was difficult to obtain. With the exception of the few foundations which publish annual reports, the public had little access to foundation records. After passage of this law the amount of information available on private foundations increased because of the stringent reporting requirements. An annual report on Form 990 annual information returns must be filed with the Internal Revenue Service if foundation assets are at least $5,000. (53:78.) Through the Foundation Center's collection of 990 tax returns, information on individual foundations has been made available to the public.

A second important requirement of the 1969 Tax Law, as amended by Congress in 1976, was that foundations must give for charitable purposes whichever is larger, annual income or 5 percent of investment assets. (19:5.) This means that there has been a specific payout requirement, and that foundations must distribute a specific amount of funds each year, which then have been made available to organizations and institutions that can apply for and compete for these funds.

Information on foundation grant patterns to help applying organizations effectively compete for foundation funds has been available in terms of aggregate data only. These data suggested that broad relationships exist among foundations and between foundations and higher education. From these data certain variables were identified which affect the accessibility of foundations to institutions of higher education. Identified variables included: 1) foundation type, 2) asset size, 3) total grants made, 4) grant purpose or categories of support, 5) geographical orientation of the grant-making foundation, and 6) the geographical location of the foundation.

Review of the Dissertation Literature

A review of the dissertation literature showed the studies to date had been directed to highly specific areas. There was a small but growing body of knowledge on institutional variables influencing fund-raising efforts by a college or university development office. (31, 35, 40,47, 48, 51.) Three studies investigated foundation support of particular areas of higher education. Szczypkowski surveyed two hundred of the largest private foundations and concluded her findings revealed widespread foundation involvement in Continuing Professional Education from 1966 to 1970. (54.) Humphrey investigated foundation interest in colleges with degree programs in health and physical education from 1953 to 1964. Of 332 foundations replying to her questionnaire, only thirteen indicated they had given grants to health and physical education. Of 513 health and physical education departments in institutions replying to her questionnaire, only fifteen indicated they had received a foundation grant. (34:56.) Blount examined grant-making patterns of ten selected major private foundations directed to college and university administration from 1965-66 to 1974-75. Her major conclusion was that these ten private foundations responded to the concern of college and university administrators not only by increasing their grants over the second half of the decade but also by targeting their grants into specific priority areas of concern. (5:239.)

Dane concentrated on the grant records of twenty largest broad purpose foundations. He analyzed the trends of their financial support to general programs in higher education during 1955-1970. The trends he showed during this period were: foundations were making almost five times more grants than in 1955; higher education was receiving one-half of these grants; most grants were directed to support of plant expansion, the faculty, and the institution. (12:2.)

One study concentrated on a specific foundation, the Carnegie Foundation for the Advancement of Teaching. Bell studied the influence of the foundation from 1950 through 1970 and concluded its work had been highly influential in higher education. (4.)

Two other studies focused on specific aspects of foundation support. Cheatham studied the grant payments of fifteen selected foundations from 1963 to 1973 to historically black colleges. He concluded foundations had been responsive to the needs of black colleges. (10.) Broce analyzed foundation grants to higher education in a specific state, Oklahoma. (7.)

Lawson examined the relationship between the criteria used by foundation officials in evaluating grant proposals and the criteria used by administrators of higher education in preparing grant proposals in the past. From this he concluded there had been and would continue to be a close relationship between the criteria used by each group. (38.)

Overview of Foundations

Types of Foundations

Two major typologies of foundations have been those done by the Foundation Center and by the Council on Foundations. The Council on Foundations identified foundations by their source of funds: 1) independent foundations receiving their funds from a single person or a few individuals, 2) corporate foundations (also called company-sponsored foundations) receiving their funds from profit-making businesses, and 3) community foundations building their endowments from bequests and gifts from a number of donors and primarily serving the charities of a city or region. The Council on Foundations also identified foundations by their programs: 1) general-purpose foundations made grants in education, health, social welfare and a range of other human services, 2) special-purpose foundations confined grants to a specific field, and 3) operating foundations provided a charitable service directly rather than give money to others to do so. (25:548.)

The major difference between the typology of the Foundation Center and the Council on Foundations has been that the Foundation Center's typology contained additional categories based on mode of operation and geographical scope. Independent foundations were called private, grant-making foundations, a term encompassing the majority of foundations, with the additional categories of company-sponsored and family foundations. Foundations were called local foundations if they gave only in their own community as opposed to regional or national foundations which gave grants on a wider geographical basis. (25:x.)

Number of Foundations

The National Data Book, published in 1977, listed a universe of 21,877 active grant-making and operating foundations. (24:vi.) Although the Internal Revenue Service files of foundations contained approximately 28,000 foundations, the Foundation Center discovered about 6,000 of these did not qualify for inclusion in the foundation universe. (24:iii.)

The vast majority of foundations have been private. Of the 2,818 foundations in the sixth edition of the Foundation Directory, 2,284 (81 percent) were private (excluding company-sponsored), 462 (16.4 percent) were company-sponsored, and 72 (2.6 percent) were community foundations. (25:xi.)

Foundation Assets and Grants

Eighty-seven percent of foundations were of small asset size. Edition six of the Foundation Directory used as a criteria for inclusion foundation assets of one million dollars or more or total annual grants of $100,000 a year. This resulted in inclusion of 2,818 foundations as compared to the total universe of 21,877 foundations in the National Data Book. The 21,877 foundations possessed total assets of $30,129,268,781 and made total grants of $1,944,854,843

(24:vi.) while the 2,818 foundation population had total assets of $28,635,399,000 and made grants of $1,807,736,000. (25:xi.) Therefore, it can be estimated the remaining 19,059 foundations had assets of $1,493,869,780 (4.96 percent of total foundation assets) and made $137,118,843 (7.05 percent of total foundation grants) total annual grants.

It should be noted that the Tax Reform Act of 1969 required a 4 percent tax on net investment income of private foundations. This tax was reduced to 2 percent by the Revenue Act of 1978, effective for accounting years beginning after September 30, 1977. Due to this reduction, funds which previously had to go for tax purposes should be freed for philanthropic purposes. Bolling estimated

> The reduction of the excise tax in effect makes additional millions of private philanthropic foundation funds available for philanthropic giving--at least $35 million a year additional on the basis of recent experience. (20:1.)

While the majority of foundations have assets of less than one million dollars, the large asset foundations control the majority of aggregate foundation assets. As table 1 shows, almost 44 percent of total foundation assets in Foundation Directory, edition six, were controlled by thirty-nine foundations which had assets of $100 million and above. This is in contrast to the other end of the scale where 2,646 of the 2,818 foundations had assets of $25 million or less and controlled 34.1 percent of total foundation assets. (25:xiii.)

TABLE 1

FOUNDATIONS BY ASSET CATEGORIES WITH AGGREGATE AND AVERAGE GRANTS

Asset Category (In Millions of Dollars)	Number of Foundations	Assets (In Thousands of Dollars)	Percent of Assets	Total Grants[a] (In Thousands of Dollars)	Percent of Total Grants
$100 and above	39	12,502,869	43.7	625,548	35.9
25 to under 100	133	6,372,581	22.2	296,345	17.0
10 to under 25	228	3,575,793	12.5	213,631	12.2
5 to under 10	349	2,460,511	8.6	179,421	10.3
1 to under 5	1,638	3,555,590	12.4	318,110	18.2
Under 1	431	167,996	0.6	112,050	6.4
Totals	2,818	28,635,339	100.0	1,745,104	100.0

Asset Category (In Millions of Dollars)	Average Grant Amount	Number of Grants	Percent of Number of Grants
$100 and above	49,584	12,616	6.7
25 to under 100	21,086	14,054	7.5
10 to under 25	11,533	18,524	9.9
5 to under 10	6,130	29,268	15.7
1 to under 5	3,967	80,195	42.9
Under 1	3,455	32,427	17.3
Totals		187,084	100.0

SOURCE: Foundation Center. The Foundation Directory, 6th ed. Edited by Marianna O. Lewis. (New York: Foundation Center, 1977): p. xiii.

[a] Grants figures exclude amounts for programs, matching gifts, and scholarships or fellowships

A relationship exists between asset size and grant size. Eighty-six percent of the number of grants (160,414) made by foundations included in the sixth edition of the Foundation Directory were made by foundations with assets of $25 million or less. The average grant size ranged from $3,455 from foundations with assets under $1 million to $11,533 from foundations with assets of from $10 million to under $25 million. Forty-seven percent of total grant dollars were given by foundations with assets of $25 million or less. Foundations with assets of $25 million and above gave fewer (14 percent) but larger grants. The average grant of foundations with assets of $25 million to under $100 million was $21,086. Those with assets of $100 million and above gave large grants, averaging almost $50,000 but gave only 6.7 percent of the total number of foundation grants. (25:xii.)

This relationship between asset and grant size was seen in Rooks' study of grant making in the Southeast during 1974. Of 196 foundations in Southeastern states, 16 foundations with assets of $20 million or more contributed 59.4 percent of the total grants in the Southeast in 1974. Only 22 percent of the total was granted by foundations with assets of $1 million to $4.9 million even though they numbered 73 percent of the total Southeastern foundations. (49:14-15.)

A relationship between foundation grant size and percent of grants to private and public institutions was determined in a study done by the Council of Michigan Foundations and the Michigan League for Human Services. This study analyzed grant-making patterns of 106 foundations which made grants of over $50,000 in Michigan during 1976. It was estimated these grants accounted for nearly 90 percent of the dollar amount of all grants made in Michigan by Michigan foundations. As total foundation grant size increased, so did the percent given to public institutions. Foundations which gave less than $100,000 in grants gave 88.6 percent of total giving to private agencies. Foundations which gave over $2 million in grants gave only 63.2 percent to private institutions. (18:55.)

Type of Foundation and Grant Dollars Awarded

The majority of grants are made by private foundations other than corporate foundations. Among foundations in the Foundation Directory, edition six, private foundations (excluding corporate foundations) made 82.7 percent of the total grant dollars, corporate foundations made 13.5 percent of the total grants, and community foundations made 3.8 percent of the total grant dollars. (25:xi.) Grants from family foundations were not listed separately.

This pattern was supported by Colvard and Bennett's analysis of five types of foundations in relation to percent of support given to higher education. The general purpose foundations clearly gave the most support, 71 percent of the total. Special purpose foundations gave 9 percent of total support, community foundations gave only

3 percent, corporate foundations gave 12 percent, and the family or miscellaneous category gave 5 percent. (12:5.)

Geographical Distribution and Orientation of Foundations

Geographical distribution of foundations is concentrated in certain areas of the country as shown in table 2. Almost half are located in the Middle Atlantic area of New York, New Jersey, and Pennsylvania. This geographical distribution concentration applies to both number and assets. The Middle Atlantic states had over a third of the total number of foundations, over 50 percent of total foundation assets, and gave nearly 56 percent of total grants. Over 40 percent of total foundation assets are held in New York. Many New York foundations, however, make regional or national grants since many of these are the very large, older foundations. (25:xviii.)

TABLE 2

NUMBER, ASSETS, AND GRANTS OF 2,818 FOUNDATIONS BY GEOGRAPHICAL REGIONS

(Dollar figures in thousands)

Region	Number	Assets	Grants*
Middle Atlantic	882	$13,502,071	$ 830,928
East North Central	603	5,965,398	390,716
West South Central	222	2,215,808	124,702
Pacific	286	1,955,426	138,257
South Atlantic	300	1,863,659	112,435
West North Central	202	1,246,486	83,772
New England	211	1,138,892	81,131
Mountain	62	437,482	26,219
East South Central	49	299,969	19,620
Outlying Areas	1	10,149	5
Total	2,818	$28,635,339	$1,807,736

SOURCE: Foundation Center, The Foundation Directory, 6th ed. Edited by Marianna O. Lewis. (New York: Foundation Center, 1977): p. xviii.

*Grants data were lacking for twenty-three foundations. The grants figure includes grants, programs, matching gifts, and scholarships or fellowships.

This pattern was confirmed by the findings of Colvard and Bennett whose results showed 50 percent of the top one hundred foundations in terms of academic grant funds provided were in the Middle Atlantic region. The second highest regional concentration, 18 percent, was in the

East North Central Region (Illinois, Indiana, Michigan, Ohio, and Wisconsin) which is also the second highest in terms of location of total number of foundations. (12:6, 25:xviii.) Although the geographical distribution of foundations is concentrated in specific regions, when grant recipients were analyzed by state location, Colvard and Bennett found recipients were geographically dispersed. For example, the Middle Atlantic states averaged only 19.5 percent in terms of recipient location. (12:13.) Colvard and Bennett did not correlate their findings with the distribution of foundations in the Foundation Directory or correlate location of foundations with location of grantees.

If the total population of foundations is examined, it can be seen that most foundations give only in their own cities or states. Of the 2,818 foundations in the sixth edition of the Foundation Directory, 1,825 (65 percent) gave only in their own cities or states. Generally they are smaller in asset size and give smaller grants in terms of dollar amounts but more in terms of number of grants than do the 993 (35 percent) which are regionally or nationally oriented. (25:xvii.)

The most comprehensive study of grant making in a region was done by Rooks who studied 1974 grants in the eleven state Southeastern region. Two-thirds of the total grants to Southeastern recipients were given by foundations located in the Southeast. (49:3.) While all eleven states in the Southeast received some foundation money, some states received much more money than others. Georgia and North Carolina together received 58.4 percent of all the foundation funds granted to Southeastern recipients. The proportion going to other Southeastern states ranged from 7.8 percent to less than 1 percent. (49:5.) This was explained by the fact that most grant making by Southeastern foundations was very localized. Over 80 percent of grants went to recipients in the same state as the grantor. Georgia and North Carolina foundations gave slightly more than $80 million of the $120 million distributed by the 196 Southeastern foundations (49:10-11.) which accounted for these states having received such a high percent of Southeastern grants.

Rate of Reply to Requests for Information in Relation to Foundation Asset Size and Amount of Staff

One reason so many foundations are not responsive to requests for information or funds is because so few foundations have assets large enough to support a professional staff. The lack of staff has affected the way grant applications and requests for information have been handled by foundations. The Foundation Center did a study cited in their 1977 edition of the Foundation Directory. Requests for information were sent to each of the 2,818 foundations qualifying for inclusion in this Directory. Replies with all or part of the requested information were received from 68 percent of the foundations. Therefore, 32 percent or nine hundred foundations did not reply at all. The relationship between asset size and percent of replies was very high. Foundations with assets of $100 million and above accounted for 79 percent of the replies. The percent of replies consistently decreased as assets decreased; e.g., replies were received from only 27 percent of foundations with under one million dollars in assets but which gave over $100,000 annual total grants. The Foundation Center concluded the "declining rate of response...is a function of the smaller staffs at the lower asset levels or of no full-time staff at all." (25:xiv-xv.)

Zurcher and Dustan mailed questionnaires to 785 foundations and received replies from 362. They also discovered the response rate was related to asset size. Seventy-five percent of foundations with assets of $100 million or more responded while 53 percent or less of foundations with assets of $25 million or under responded. (63:7.)

The low rate of reply by foundations has been due in great part to the fact that so few foundations have had any professional staff and those that did were concentrated among the very large foundations. In a 1972 study, Zurcher and Dustan discovered that 25 percent of the total full-time paid foundation administrators were at the Ford Foundation, 15 percent were at the Rockefeller Foundation, and 12 percent were on the staff of eleven other foundations. Thus, 52 percent of full-time paid administrators were at thirteen foundations. They discovered only 212 foundations employed one or more full-time professional staff. If the foundations that employed only part-time help were added to those that employed full-time help, the number of employing foundations rose from 212 to 345. (63:20.) This meant that less than 1.5 percent of the foundation universe had any staff. (43:64.) Zurcher and Dustan's survey showed a total of only 1,062 staff on all grant-making foundations. (63:19-20.)

In 1973 the Council of Foundations did a survey of foundations and discovered the number of executive staff had increased by 25 percent since the Zurcher and Dustan study. They also discovered that 46 of a total of 350 respondents had added their first executive during that period. (9:1567.) However, 39 percent of the foundations replied they had no executive staff and 56 percent listed no "others" on their payrolls. Ford and Rockefeller had 23 percent of the total executive and other staff reported. Therefore, "foundation staffs are still typically small, and probably too many foundations are still completely unstaffed even when they control substantial assets." (9:1567.)

The Filer Commission felt tax exempt organizations should recognize an obligation to be responsive to changing viewpoints and emerging needs. One conclusion of the Filer Commission was that private foundations should make a great effort to provide adequate staffs in relation to the foundation's financial resources and if a private foundation did not have adequate resources to engage full-time staff personnel, consideration should be given to the sharing of staff personnel with other compatible organizations. (13:23.)

Overview of Foundations and Higher Education

Foundations and Education

Since 1961, when the Foundation Center first began to record categories of foundation giving, the category of education consistently has ranked highest in grant dollars received. As table 3 shows, data from the Grants Index indicate education received 26 percent to 36 percent of total foundation grants between 1970 and 1977. (26:viii, 27:viii, 28:x, 29:x-xi, 30.)

Similar results were obtained in a study of grant-making patterns of 106 foundations which made grants of over $50,000 in Michigan during 1976. Education received 30.3 percent of total grants given by Michigan foundations. However, these data also showed education received 55.8 percent of the total given by non-Michigan foundations. These data may suggest that non-local foundations, which usually are of a large asset size, give a greater percent of funds to education than do local foundations. (18:55.)

Because so many projects or programs funded by foundations under other headings are channeled through educational institutions, the Foundation Center has estimated that probably more than half the foundation dollars reported go to education, broadly defined. (25:xx.) Of this, it can be estimated that higher education (including donations not specifically given to institutions of higher education

TABLE 3

SUPPORT PROVIDED BY FOUNDATIONS, BY AREA: 1970-1977
(In Millions of Dollars)

Area	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
	1970		1971		1972[a]		1973	
Education	$281	36	$ 343	32	$206	27	$258	36
Health	121	15	156	15	123	16	172	24
Science	93	12	111	10	130	17	87	12
Welfare	136	17	174	16	133	17	67	9
International	59	7	106	10	95	12	66	9
Humanities	52	7	103	10	65	9	57	8
Religion	51	6	73	7	17	2	9	2
Total	$793		$1,066		$769		$716	

Area	1974		1975		1976		1977	
Education	$199	28	$ 177	26	$217	29	$200	26
Health	138	20	162	24	141	19	167	22
Science	87	12	105	16	125	17	135	17
Welfare	109	16	80	12	104	14	100	13
International	76	11	75	11	72	9	85	11
Humanities	78	11	65	9	81	11	66	9
Religion	14	2	13	2	12	1	17	2
Total	$701		$ 677		$752		$770	

SOURCE: Compiled from Foundation Center. Foundation Grants Index. (New York: Foundation Center): 26:viii, 27:viii, 28:x, 29:x-xi, 30.

[a] In 1972 the Foundation Center introduced a new computer-based system of storage and retrieval of grants information. Criteria for inclusion weregrants of $10,000 or more in 1970-72, $5,000 or more from 1973-77.

such as educational associations, fellowships, scholarships, and loans) receives the majority of support since only 10 percent of the total amount given to education in 1974-76 specifically went to elementary and secondary education. (25:xxiii.)

However, the Foundation Center bases its estimates on data from the Foundation Grants Index. The Grants Index annually classifies grants of $5,000 or more made by 340-400 of the largest foundations. It has been estimated by the Foundation Center that the Grants Index in any given year accounts for about 35 percent of all foundation dollars given and about 65 percent of all grants of $5,000 or more in size. (25:xx.) Data are based on grants reported by foundations to the Foundation Center and on published foundation annual reports. However, only 386 of the 2,818 foundations in the Foundation Directory, edition six, published annual reports. In addition, not all foundations report grants of $5,000 or more to the Foundation Center. Therefore, the Grants Index classification has been based on information from only the very largest foundations or from the few that issue annual reports. In addition, many of the grant categories have overlapped, and subdivisions have been somewhat arbitrary since a grant often could fit into more than one category. Because of these factors, the Grants Index is best used as an indication of the trends and proportions; i.e., that a major proportion of foundation giving has been for higher education.

An indication of the deficiency of the voluntary reporting system of individual foundations to the Grants Index could be seen in the results of a study, Foundation Philanthropy in the Southeast. (49.) To obtain the total 1974 grants given by foundations in Southeastern states, the Grants Index was dependent on voluntary reports while the Southeastern Council Research Study used data from 990-AR's of Southeastern foundations whose assets were $1 million or more. The results were that the Foundation Center reported a total of $28,023,933 grants and the Southeastern Council Research Study obtained a total of $120,459,412. (50:32-33.) Thus, Southeastern foundations granted over four times more money in 1974 than they reported to the Foundation Center which meant the Foundation Center's estimate that the Grants Index in any given year accounts for about 35 percent of all foundation dollars given may have been too high.

Foundation Support of Higher Education

Foundation support has been concentrated among private rather than public institutions. Table 4 shows that private gifts and grants to higher education have accounted for between 9.4 percent and 10.2 percent of the current fund income of private institutions of higher education between 1970 and 1976, as opposed to 1.9 percent to 2.3 percent of the current fund income of public institutions. (56:126, 57:131-132, 58:122, 59:107, 60:105, 61:108.) In 1976 foundations contributed approximately 23 percent of the total

TABLE 4

CURRENT FUND INCOME OF INSTITUTIONS OF HIGHER EDUCATION:

1969-70 TO 1975-76

(In Thousands of Dollars)

	Tuition and Fees	Government			Endowment Earnings	Private Gifts and Grants	Other
		Federal	State	Local			
1969-70	4,419,845	2,682,384	5,787,910	774,803	447,275	1,001,454	6,401,573
Total	20.5%	12.5%	26.9%	3.6%	2.1%	4.7%	29.7%
Public	12.6%	12.3%	41.3%	5.2%	.4%	1.9%	26.3%
Private	34.7%	12.8%	1.3%	.8%	5.0%	9.5%	35.9%
1970-71	5,021,211	2,824,626	6,502,813	907,274	470,655	1,091,655	7,060,955
Total	21.0%	11.8%	27.2%	3.8%	2.0%	4.6%	29.6%
Public	13.1%	11.7%	41.1%	5.4%	.4%	1.9%	26.4%
Private	35.8%	12.1%	1.4%	.8%	5.0%	9.5%	35.4%
1971-72	5,594,095	3,098,897	7,120,982	991,034	480,806	1,208,070	7,740,379
Total	21.3%	11.8%	27.1%	3.8%	1.8%	4.6%	29.6%
Public	13.7%	11.8%	40.8%	5.5%	.3%	1.9%	26.0%
Private	35.6%	11.8%	1.7%	.5%	4.6%	9.7%	36.1%
1972-73	6,010,926	3,393,319	7,917,825	1,143,529	515,041	1,300,343	8,826,032
Total	21.0%	11.9%	27.7%	4.0%	1.8%	4.5%	29.1%
Public	13.4%	12.1%	41.2%	5.7%	.4%	2.0%	25.2%
Private	35.6%	11.5%	1.7%	.6%	4.6%	9.4%	36.6%

TABLE 4 - Continued

	Tuition and Fees	Government			Endowment Earnings	Private Gifts and Grants	Other
		Federal	State	Local			
1973-74	6,500,101	3,519,541	9,182,182	1,263,145	576,915	1,430,982	9,239,581
Total	20.5%	11.1%	28.9%	4.0%	1.8%	4.5%	29.2%
Public	12.9%	11.1%	42.3%	5.6%	.4%	2.0%	25.7%
Private	35.8%	11.0%	2.1%	.6%	4.8%	9.5%	36.2%
1974-75[a]	7,232,908	6,072,554	10,857,376	1,424,392	717,915	1,744,967	8,718,375
Total	20.3%	17.0%	30.4%	4.0%	2.0%	4.9%	21.4%
Public	12.8%	15.8%	44.2%	5.6%	.4%	2.3%	18.9%
Private	35.6%	19.6%	2.1%	.7%	5.2%	10.2%	26.6%
1975-76	8,171,942	6,477,179	12,260,886	1,616,975	687,470	1,917,038	8,571,681
Total	20.6%	16.3%	30.9%	4.1%	1.7%	4.8%	21.6%
Public	13.0%	14.9%	44.6%	5.6%	.4%	2.3%	19.3%
Private	36.5%	19.2%	2.3%	.9%	4.6%	10.1%	26.3%

SOURCE: Compiled from U.S. Dept. of Health, Education and Welfare. National Center for Education Statistics. Digest of Education Statistics. (Washington, D.C.: Government Printing Office): 56:126, 57:131-132, 58:122, 59:107, 60:105, 61:108.

[a] In FY 1975 the report form was changed so categories prior to 1975 are not strictly comparable to categories after 1975. One major change was that private gifts and grants after 1975 included private contracts.

voluntary support to higher education. Private institutions received approximately 10 percent of current fund revenues from private gifts and grants and about 2 percent of this income came from foundations. While foundation support of higher education has been but a small proportion of total income, it is particularly important because foundation support often can enable higher education institutions to achieve objectives that would not otherwise be possible.

Rooks' study also concluded that private institutions of higher education received the majority of education grants given by foundations. However, he discovered the percent given to private institutions varied according to the three groups of foundations whose grants he analyzed. Slightly over 87 percent of the grants to institutions of higher education from Southeastern foundations were to private institutions while 83.5 percent of the education grants to institutions of higher education from private non-Southeastern foundations were to private colleges and universities. Corporate non-Southeastern foundations, in comparison, gave only 57.7 percent of all their education grant dollars to private institutions. (49:33-34.)

Foundation support of higher education has been consistent and increasing in terms of absolute dollars but slightly decreasing as a percent of the total voluntary support to higher education, as can be seen in table 5. The Council for the Financial Aid to Education (CFAE) annually obtains information from institutions of higher education regarding voluntary support of higher education.

The survey has been based on data from a large sample (991 institutions in 1976, 1,006 institutions in 1977) and on different types of institutions. From this survey total voluntary support of higher education to all institutions of higher education has been estimated. Results have shown that foundations consistently have supported higher education. During 1972 through 1977 private foundations contributed between 21 percent and 26 percent of the total voluntary support of higher education. (15:4, 16:4, 17:4-5.) Actually, these data have underestimated total foundation giving since grants made by corporate foundations were included with corporate giving rather than with foundation giving in CFAE data. CFAE does not have separate data available on corporate foundation giving to higher education. (52.)

TABLE 5

RELATIONSHIP BETWEEN TOTAL VOLUNTARY SUPPORT AND FOUNDATION SUPPORT OF HIGHER EDUCATION: 1972-1977

(In Millions of Dollars)

Year	Estimated Total Voluntary Support	Foundation Support	
		Dollar Amount	Percent of Voluntary Support
1972	2,020	523	26
1973	2,040	524	26
1974	2,240	535	24
1975	2,160	497	24
1976	2,410	549	23
1977	2,670	646	21

SOURCE: Compiled from Council for Financial Aid to Education. Voluntary Support of Education (New York: Council for Financial Aid to Education): 15:4, 16:4, 17:4-5.

That individual foundations which have an interest in higher education have tended to maintain a steady level of support was suggested by a study of nine of the largest foundations which make grants to higher education. The study was done by Havighurst, Holsinger, and Lunde. When grant dollars were translated into constant dollars, the authors found there was not much change in the annual total of grant dollars between 1964 and 1973. (32:1.2.)

Higher education as a broad area of foundation support was confirmed by both the Colvard and Bennett study and by the Rooks study. Colvard and Bennett analyzed 276 foundations which yielded data that from half to two-thirds of the 276 foundations made at least one grant a year to a college or university. (7:2.) However, certain foundations favored higher education more than did others, and grants were concentrated among these foundations. In analyzing grants made in 1963, 1966, 1969, and 1970, Colvard and Bennett saw that each year at least 46 percent of the grants and 75 percent of the actual funds came from no more than 25 percent of the foundations. (12:3.) An even greater concentration was seen in terms of dollars awarded. In 1970, 25 percent of the foundations supplied 74.7 percent of the total funds. (12:4.)

Rooks analyzed three groups of foundations and discovered all three gave more to education than to any other field but the percent given varied considerably among these groups. The three groups of foundations were Southeastern foundations, non-Southeastern corporate foundations, and other (private) non-Southeastern foundations which gave grants in the Southeast. Non-Southeastern corporate foundations gave over 61 percent of their funds to education, other non-Southeastern foundations gave almost 50 percent to education, and Southeastern foundations gave about 38 percent to education. (49:33.) Although Southeastern foundations gave a lower percent of their total grants to education, they account for the majority of support to education in the region. Of the almost $67 million given to education by foundations, $41 million came from Southeastern foundations while $26 million came from foundations located outside the Southeast. (49:3.)

An indication of the proportion of grants awarded to higher education out of total grants per year was obtained by Dane. In a 1974 dissertation, Dane concentrated on twenty largest broad-purpose foundations as defined by their 1970 asset holdings and which had contributed at least 20 percent of their 1970 domestic expenditures to higher education. (21:131.) His analysis showed that an average of 50 percent of the sample foundation domestic contributions went for higher education during 1955-1970. (21:60.)

Broce examined the grants records of Oklahoma foundations to Oklahoma institutions of higher education during 1965-67 and saw that higher education had received 25.9 percent of the total grants made by these foundations. (7:88.) Broce's study analyzed localized giving and found a lower percentage of total foundation grants went to higher education than did Dane's study which looked at the grantmaking of some of the largest foundations. The latter tend to have a broad geographical orientation in their grantmaking. Therefore, the results of these two studies suggested a relationship between geographical orientation of foundations and the amount of support given to higher education.

Foundations and Types of Institutions of Higher Education

Foundation support has not been distributed evenly among all types of educational institutions. Based on their 1976 survey of 991 institutions of higher education, CFAE results showed that professional and specialized schools received 36.4 percent of total foundation grants to higher education, the largest proportion of foundation funds received by any type of institution. Major private universities received 25.7 percent of the total. Both these categories received more than the total for public institutions which received 21.6 percent of foundation dollars. Private men's colleges, private women's colleges, private coeducational colleges, and junior colleges all received between 15 percent and 18 percent of the remaining contributions. (16:64.) Broce also showed a difference in the proportion of foundation support of public and private institutions. More than 35 percent of the total grants to institutions of higher education in his study was awarded to publicly controlled institutions; almost 46 percent, to private. The remaining 19 percent was awarded to undesignated grants to higher education in Oklahoma. (7:139.)

In a study of the financial support received by 105 historically black colleges and universities from fifteen selected private foundations during 1963-73, Cheatham showed that 6 percent of the total foundation grant payments went to black institutions. Ford Foundation grant payments during the ten year period equalled slightly more than 50 percent of the total received by black colleges and universities from the fifteen foundations. (10:49.) However, support of minority institutions has appeared to vary according to foundation location and type. While Rooks felt that minority group recipients were often difficult to identify (49:22.), he discovered minority group recipients received 51.5 percent of the total education grants from private non-Southeastern foundations, 33.3 percent of the education grants from corporate non-Southeastern foundations, and only 4.5 percent of the education grants from Southeastern foundations. (49:34.)

Concentration of foundation support among specific types of institutions from foundations with assets of $8 million or more was seen in Colvard and Bennett's study. By analyzing grants made in 1963, 1966, 1969 and 1970 by 276 foundations with an asset size of $8 million or more, the authors discovered grants mainly went to one hundred universities and colleges out of a potential of at least 2,500 grantee institutions. For example, in 1970 one hundred colleges and universities received 83.7 percent of the grant dollars and 54.7 percent of the total grants. (12:8.) This pattern suggests results were heavily weighted by foundations with assets of $25 million or more since they make large dollar grants but fewer of them than do foundations with assets of under $25 million. Universities offering "'liberal arts and general curricula and including three or more professional schools' consistently received most of the funds each year." (12:9.) The top twenty-five grantee institutions received from 63.6 percent of funds in 1963 to 56.4 percent of funds in 1970, indicating a concentration of grants among these institutions but a downward trend in this concentration. (12:8.) Results also showed there was a substantial overlapping of universities receiving large foundation grants and those receiving federal research funds. More than half the top fifty universities receiving federal research grants were also in the top fifty institutions receiving private foundation grants. (12:15.) Colvard and Bennett noted, "As with federal funding, much of large-scale private foundation grant-making is undoubtedly defined as being given not so much to as through U.S. CUs (colleges and universities), to purchase available expertise." (12:2.) This study contained no statistical analysis of results such as correlations between variables like asset size of foundations with total grants made or with types of institutions supported. The study excluded foundations with assets of less than $8 million or grants of less than $10,000 and used only grant data provided by the Grants Index.

Categories of Support

Foundation vs. Federal Support of Categories of Aid to Higher Education

Very different types of areas of higher education were seen to be supported by the federal government when contrasted to foundation expenditures in a study by Kolenda, Borque, and Smith. The study was done for the Filer Commission. Results showed that foundations spent seven cents on education for every dollar of comparable federal spending. (37:1681.) However, higher education received a greater proportion of support, fourteen cents for every federal dollar. (37:1682.) Nearly three-fourths of the federal dollar was for student support. Operational support received only seventeen cents of the federal higher education dollar. In contrast, foundations gave greater support for personnel training, facilities and equipment purchases, and education-related researches. Over half the foundation dollar went for research and facilities and equipment purchases, compared to nine cents of the federal dollar. "Stated alternatively, foundations spent eighty-one cents for every federal dollar for these two purposes combined." (37:1683.) This study used data drawn from a sample of 4,959 grants reported in the 1973 Foundation Grants Index, which the authors felt represented approximately 20 percent of total foundation giving during the year. Since it was based on Grants Index data, the research was not representative of all the remaining foundations which did not report grants or did not issue annual reports.

Foundation Support of Categories of Aid

Since 1972 foundations have favored support of current operations over capital giving, although a large proportion of their giving does go for capital expenses. CFAE data show that between 1972-77 current operations received between 62.1 percent and 53.3 percent of foundation support. Capital support varied from a low of 37.9 percent in 1975 to a high of 46.7 percent in 1973. (15:61, 16:61, 17:11.) In comparison, the Foundation Center's analysis of Grants Index data showed 17 percent of grants to education went for buildings and equipment in 1974-76. (25:xxiii.) However, other grants for this purpose may be obscured because many grants can serve multipurposes and are therefore difficult to classify into only one category in the Foundation Center's system of classification.

In his study of foundation grants in the Southeast, Rooks discovered there were distinct differences in the grant purposes of Southeastern and non-Southeastern foundations. Private non-Southeastern foundations clearly favored special projects with 72 percent of their grants to higher education going for this purpose. Corporate non-Southeastern foundations also gave a high proportion, 31 percent, of their grants for special purposes. However, Southeastern foundations gave only 15 percent of their total grants for special purposes. Southeastern and corporate non-Southeastern foundations favored general support grants. Fifty-one percent of Southeastern foundation grants and 45 percent of corporate grants went for general support of higher education. Private non-Southeastern foundations clearly gave few grant dollars, only 2 percent of their total higher education giving, for general support. Capital projects and student aid both received support from all three groups of foundations. Capital projects received 20 percent of total Southeastern foundation grants, 13 percent of non-Southeastern corporate foundation grants, and 11 percent of private non-Southeastern foundation grants. Student aid received almost an equal percent of total grants from all three groups of foundations: 16 percent of private non-Southeastern foundation grants to higher education, 17 percent of corporate non-Southeastern foundation grants, and 14 percent of Southeastern foundation grants. (49:33-34.)

Of the twenty foundations whose grant records were examined by Dane from 1955 to 1970, there was an increasing trend of support to special education (scholarship and fellowship support, student loan funds, research and pilot programs, and programs such as welfare and educational improvement) as opposed to general education program support (operating budgets, capital improvements, capital funds, endowment funds, salaries, and other nonspecific funds). Forty-nine percent of the grants in 1955 were designated to support programs in general education. This percentage jumped to 71 percent in both 1960 and 1965 and dropped to 62 percent in 1970. Dane felt this indicated foundations responded to the institutional needs of higher education in the late 1950's and 1960's. The drop in 1970, he felt, was due to foundations' increasing awareness and concern with equal opportunity, social justice, and inner-city problems. (21:132.)

Havighurst, Holsinger, and Lunde, in a 1976 study of nine of the largest foundations which support higher education, said the bulk of foundation financing was for general support of education in contrast to support of innovation, experimentation and training of personnel for these functions. In regard to the latter type of support, they estimated the federal government supported 70 percent of educational innovation and experimentation while 21 percent of the support came from foundations and 9 percent came from colleges and universities. (32:3.2.) Their criteria for making these judgments were not specified in the report.

Summary and Conclusions

From this review it can be seen that while foundations are an important source of income for higher education, the majority of available information on foundation grant-making patterns has been known in broad terms only. The available knowledge is that there are broad relationships that exist among foundations and between foundations and higher education.

These relationships among foundations include the following information: 1) The majority of foundations possess very small assets. 2) Large asset size foundations give larger grants but fewer of them than do small asset size foundations. 3) Foundations are not located evenly throughout the country but are concentrated in certain geographic locations. 4) Most foundations give only in their own cities or states and give smaller dollar amounts of grants but more of these grants than do those foundations which are regionally or nationally oriented. 5) Most foundations are private rather than company-sponsored or community foundations.

Regarding foundations and higher education the following information is known: 1) Foundations historically have given a large proportion of their total support to education and consistently have supported higher education. 2) Private institutions have received a greater percentage of foundation funding than have public institutions of higher education. 3) Foundation support of higher education has been in very different areas of support than was federal support. 4) Foundation support has not been evenly distributed among all types of educational institutions. 5) Support to higher education by large asset size foundations has been concentrated among large research institutions. 6) Foundations have given more to current operations than to capital support, although a large proportion of their giving has been for capital expenses.

Much of this information is based on data from the Foundation Center, CFAE, and the federal government, all of which provide mainly aggregate data. What few studies have been done related only to large asset size foundations, had concentrated on grants made in specific geographical regions, or had focused on highly specific areas. The Kolinda, Borque, and Smith study and the Colvard and Bennett study used Foundation Grants Index information which included mainly grants of large asset size foundations. The Dane study and the Havighurst, Holsinger, and Lunde study analyzed a select sample of the very largest asset size foundations. At the time of this study, there were no studies of grant patterns of intermediate or small asset size foundations in relation to institutions of higher education, and it was not known whether they were similar or dissimilar to those of the large asset size foundations. With the exception of the Colvard and Bennett study, there were no data on specific foundation grant patterns that could be applied from aggregate foundation data to specific types of institutions in order to facilitate understanding of the grant-making foundations to institutions of higher education. Since it was known that these broad relationships existed, it was felt they could be refined by examination of the grant-making records of foundations to institutions of higher education into a set of variables which institutions of higher education could use to measure their potential success in obtaining funds from foundations.

CHAPTER III

METHODOLOGY

Sample Selection

The population sampled was the 2,818 private, grant-making foundations contained in the Foundation Directory, edition six. All of these foundations had reported assets of $1 million or more or made total contributions of $100,000 or more during the latest tax year of record available to the Foundation Center at the time of publication of the sixth edition of the Foundation Directory: 70 percent from the 1975 tax year, 11 percent from 1976 tax returns, and 19 percent based on 1974 data. Excluded were the seventy-two community foundations included in the Directory because they made grants only in their local communities, were only 2.6 percent of the total foundation population, and made only 3.8 percent of total Directory grants. (25:xi.) Excluded also were operating foundations because they make few grants for the support of other agencies. It was not known how many foundations in the population are operating foundations.

The sample foundations were selected on the basis of random sampling. Each of the 2,818 foundations is arranged in alphabetical order in the index. Each was assigned a number from one to 2,818. A table of random numbers was used to obtain the numbers necessary for the random selection. Sampling without replacement was used to obtain the desired sample size of a minimum of 300 foundations, 409 grant records were examined, 103 of which were discarded. Once the random sample of 306 foundations was obtained, six large asset foundations that were known to support higher education were added to the sample from the list of "50 Largest Foundations by Aggregate Grants" on page xxi of the Foundation Directory.

Variables

1. Dependent variable: a grant of over $1,000 received by a private institution of higher education from a sample foundation. Grants must be made during fiscal year (FY) 1975. Grants committed for future payment were included. If grant payments had been divided over a period of years or if a grant was made during FY 1975 but payments were to be divided, the portion of the grant made during FY 1975 was considered as the total FY 1975 grant
2. Independent variables:
   a) Type of institution
      (1) Institutions were classified into type according to the classification used in the Carnegie Classification System of Colleges and Universities
      (2) The following categories were used:
         (a) Doctoral-Granting Institutions

        i) Research Universities I and Research Universities II were combined into one category
        ii) Doctoral-Granting Universities I and Doctoral-Granting Universities II were combined into one category
    (b) Comprehensive Institutions: Comprehensive Universities and Colleges I and Comprehensive Universities and Colleges II were joined together
    (c) Liberal Arts Colleges: Liberal Arts Colleges I and Liberal Arts Colleges II were united into one category
    (d) Two-year Institutions
    (e) Public Institutions

(3) An additional category of predominantly black institutions was used. These schools were identified by use of Michael and Turner's "Listing of Traditionally and Predominantly Black Institutions by State: 1976" (41:1-10.)

(4) If a grant was made to an institution not included in the Carnegie Classification System of Colleges and Universities, that grant was not analyzed

(5) If a grant was made to an institution without listing the location of that institution and if there was more than one institution of the same name, that grant was not analyzed

b) Type of foundation

(1) Private foundation: all foundations were assumed to be private foundations unless they met the following criteria established for identification of corporate, community, or private operating foundations

(2) Corporate foundation: criteria of identification were that the foundation had the name of the company from which its funds were derived or that a corporate source of funds was indicated in the "donor" section of an individual foundation description in the Foundation Directory

(3) Community foundation: criterion for identification were the words "community foundation" in the individual foundation description in the Foundation Directory

(4) Private operating foundation: criteria for identification were a statement in the "purpose and activities" section of the Foundation Directory individual foundation description that said grants ordinarily were not made for the support of independent ongoing activities of other agencies, or the words "private operating foundation" elsewhere in the individual foundation description

c) Foundation grant size: the total annual expenditures for grants in a given year. Total grants paid were defined as the sum expended not only for grants but for scholarships, fellowships, matching gifts, loans, and programs. If available for FY 1975, foundation grant size was obtained from the Foundation Directory. If not, it was obtained from the IRS 990 tax forms

d) Foundation asset size: was the total asset size in FY 1975. If available for FY 1975, this information was procured from the Foundation Directory. If not, IRS 990 tax forms were used to record this information

e) Grant purpose

   (1) If the specific purpose of a grant was stated in the IRS 990 tax form, it was recorded in one of the following categories

      (a) Scholarships, fellowships and student loan funds: if a grant was made to an institution for this purpose, it was included in this study. If made directly to students, grants for scholarships, fellowships and student loans were excluded. If a grant was made for a scholarship within a specific field of study, it was counted as scholarship support

      (b) Capital funds: this included funds for buildings, rennovation, and grants of over $50,000 for purchase of equipment

      (c) Endowment funds

(d) Research, projects, and other specific purposes: this included grants specifically made for research, projects, program support, faculty development as well as grants of under $50,000 for purchase of equipment and grants for other specific purposes

(e) Operating expenses and general support: this included grants specifically made for operating expenses and general support, grants to individual departments within an institution for which the purpose was unspecified, and foundation grants for which the purpose was unspecified

(f) Research grants given to individuals at an institution were excluded since they do not contribute directly to institutional support

(2) If the purpose of a grant was not specified in a report, it was assumed the purpose was for operating expenses and general support

(3) Grants which were divided into payment over a period of time were classified as "multi-year support." The portion of the grant made during FY 1975 was considered as the total FY 1975 grant

f) Geographical orientation of foundation

(1) Local orientation: if 80 percent of grant recipient locations were in a specific metropolitan area or state, the foundation was defined as having a local orientation

(2) Regional orientation: regions were defined as the nine geographical regions, excluding Puerto Rico, on page xviii of the sixth edition Foundation Directory. If 80 percent of grant recipient locations were in up to three regions, the foundation was identified as having a regional orientation

(3) National orientation: if 80 percent of grants were given to recipients in four or more geographical regions, the foundation was defined as having a national orientation

g) Regional location of foundation

(1) The geographical regions on table 7 were numbered one through nine in order of decreasing assets with the Middle Atlantic Region being region one and the East South Central Region being region nine

(2) Foundations were assigned to a region based on their geographical location

Data-Gathering

1. IRS 990 tax returns of foundations were the source of foundation data.

2. Since 70 percent of the tax forms used for the sixth edition Foundation Directory data were from 1975, all tax forms used in this study were based on 1975 records.
3. Based on an examination of the foundation tax returns, the following fiscal year was used: June 1, 1975-May 31, 1976.
4. Information collected from Form 990 tax returns included:
   a. Foundation asset size
   b. Foundation grant total
   c. Location of institution receiving grant
   d. Amount of grant to institution
   e. Grant purpose, if stated
   f. Notation for multi-year support, if stated
5. Data collection forms: see appendix II

Data Analysis

1. Analysis of variance and chi-square statistics were the major tools employed for data analysis. The Statistical Package for the Social Services Computer Program was used to make the necessary statistical computations. (45.)
2. The following relationships were analyzed:
   a. Number of foundations giving one or more grants to types of institutions in relation to each of the independent variables, including a chi-square analysis for each of these relationships
   b. Total number and dollar amount of grants given to types of institutions in relation to each of the

independent variables, including an analysis of variance computation for each of these relationships

3. Multiple grants to the same institution by one foundation were analyzed as a total for each special purpose and for the type of institution. Thus multiple grants to the same institution by a single foundation were counted as one total grant per purpose or per type of institution.

Summary

A random sample of 306 foundations was obtained from sampling the 2,818 private, grant-making foundations contained in the Foundation Directory, edition six. To this sample were added six large asset foundations that were known to support higher education. Grant records for FY 1975 were examined for each foundation. Grants of over $1,000 which were made to institutions of higher education were recorded. These grants were then analyzed in terms of the following independent variables: 1) type of institution of higher education which received the grant, 2) type of foundation which made the grant, 3) total foundation grants awarded during FY 1975, 4) foundation asset size, 5) purpose of the grant, 6) foundation geographical orientation, and 7) regional location of foundations. Analysis of variance and chi-square statistics were the major tools necessary for data analysis. The results of these data collections and analyses are contained in the following chapter.

CHAPTER IV

RESULTS

Introduction

Organization of Chapter

This chapter was organized into the following sections: 1) a description of the sample foundations whose grant records were analyzed in this study and a description of the overall numbers and dollar amounts of the grants obtained, 2) an overview of grants in relation to each of the independent variables, 3) a chi-square analysis and a discussion of the number of foundations which gave one or more grants to types of institutions in relation to each of the independent variables, 4) a statistical analysis and discussion of the total number and dollar amount of grants given to types of institutions in relation to each independent variable, 5) an analysis of each research question and hypothesis in relation to the results obtained, 6) an index of accessibility for each type of institution, and 7) a summary of the chapter.

Description of Sample Foundations

The random sample used in this study included a total of 409 foundations from 43 states and represented 14.5 percent of the total 2,818 foundations in the population. Of the 409 foundations in the random sample, 103 were excluded upon examination of their grant records. The number of foundations excluded and the reasons for exclusion were:

- 77 gave no grants to institutions of higher education
- 9 gave only to specialized institutions of higher education or to schools which could not specifically be identified
- 2 had dissolved
- 1 had incorporated in 1975. Its first annual report was issued in 1976
- 5 did not have itemized 1975 990 AR information available
- 6 were community foundations
- 3 were operating foundations

103 Total

This resulted in a sample size of 306 foundations. Of these, 83 were corporate foundations and 223 were private foundations. At this point, six large asset foundations were added to the sample from the list of "50 Largest Foundations by Aggregate Grants" on page xxi of the Foundation Directory, sixth edition, because these foundations were generally known to be important providers of grants to higher education. The foundations added to the random sample were Lilly Endowment, Inc., W. K. Kellogg Foundation, Carnegie Corporation of New York, Alfred P. Sloan Foundation, and The Kresge Foundation (all private foundations) and U.S. Steel (a corporate foundation). This resulted in a final sample size of 312 of which 84 were corporate foundations and 228 were private foundations. Appendix III contains a list of the foundations included in the study.

Of the 312 foundations, 228 were private and 84 were corporate. Corporate foundations represented a somewhat higher percent of total foundations in the sample than in the Foundation Directory population. While corporate foundations comprised 16.8 percent of the number of foundations in the Directory, they were 26.9 percent of the total number in this study. (See table 6.) The distinction between private and corporate foundations is the following: corporate foundations are a subdivision of private foundations based on their origin of funds. Corporate foundations have derived their funds from a profit-making company or corporation while the general classification of private foundations has derived its funds from an individual or group of individuals.

TABLE 6

NUMERICAL COMPARISON OF PRIVATE AND CORPORATE FOUNDATIONS IN SAMPLE WITH PRIVATE AND CORPORATE FOUNDATIONS IN FOUNDATION DIRECTORY

Type of Foundation	Foundations in Sample		Foundations in Directory	
	Number	Percent	Number	Percent
Corporate	84	26.9	462	16.8
Private	228	73.1	2,284	83.2
Total	312	100.0	2,746	100.0

For the purposes of this study the geographical regions on page 299 were numbered one through nine in order of decreasing assets with the Middle Atlantic Region being region one and the East South Central Region being region nine. When the number of sample foundations were compared with the number of foundations in the Directory, as table 7 shows, it could be seen that the sample proportions were a good representation of the proportions of population foundations in each region.

TABLE 7

NUMBER OF FOUNDATIONS IN SAMPLE COMPARED WITH NUMBER OF FOUNDATIONS IN FOUNDATION DIRECTORY BY GEOGRAPHICAL LOCATION

Region	Foundations in Sample		Foundations in Directory	
	Number	Percent	Number	Percent
1	103	33.0	882	31.3
2	72	23.1	603	21.4
3	21	6.7	222	7.9
4	37	11.9	286	10.1
5	32	10.3	300	10.6
6	22	7.1	202	7.2
7	15	4.8	211	7.5
8	5	1.6	62	2.2
9	5	1.6	49	1.7
Total	312	100.1	2,818	99.9

Table 8 shows a comparison by asset size of the number of foundations in the sample with the number of foundations in the Foundation Directory. The sample proportions matched the population proportions fairly consistently. The sample contained 89.7 percent of total foundations with assets of less than $25 million while the population contained 93.9 percent of these foundations. The sample contained slightly more foundations with assets of $25 million and above because of the previously discussed addition of six large foundations which were known to support higher education.

TABLE 8

NUMBER OF FOUNDATIONS IN SAMPLE COMPARED WITH NUMBER OF FOUNDATIONS IN FOUNDATION DIRECTORY BY ASSET SIZE

Asset Size (In Dollars)	Foundations in Sample		Foundations in Directory	
	Number	Percent	Number	Percent
Under 1 million	49	15.7	431	15.3
1 million to under 5 million	157	50.3	1,638	58.1
5 million to under 10 million	53	17.0	349	12.4
10 million to under 25 million	21	6.7	228	8.1
25 million to under 99 million	19	6.1	133	4.7
100 million to under 2 billion	12	3.8	38	1.3
Over 2 billion	1	0.3	1	0.04
Total	312	99.9	2,818	99.94

Description of Grants Obtained

A total of 2,878 grants to individual institutions of higher education were obtained from examination of the grant records of the 312 foundations included in the study. Eliminated from this final count were all grants to five colleges that could not specifically be identified because there was more than one college with the same name and no geographical designation. Also eliminated were all grants to twelve colleges which were not listed in the Carnegie Classification.

The total amount given by the 312 foundations in the study to institutions of higher education was $126,920,000 during FY 1975. In 1975 private, nonprofit foundations donated an estimated $497 million to institutions of higher education. (15:4.) Therefore, the sample included about 25.6 percent of the total estimated foundation giving to higher education during 1975. As previously stated, available data on voluntary support of higher education have underestimated the amount donated by private foundations. This is because corporate foundation grants have been included under the category of corporate giving rather than with foundation giving. (52.) Total aggregate grants given by the 312 foundations during FY 1975 were $567,511,606, of which $126,920,000 or 22.4 percent was given to institutions of higher education. The total aggregate grants of foundations in this study were 31.4 percent of total aggregate grants of $1,607,736,000 given by 2,818 foundations in the Foundation Directory (1975 edition). (25:xviii.)

The six foundations added after the random sampling was completed donated a total of $48,080,406 to institutions of higher education, or a total of 440 grants to individual institutions. Therefore, they accounted for 15.3 percent of the total number of grants to institutions and 37.9 percent of the total grant dollars in this study. Excluding these six foundations, the total grant dollars in this study would have been $78,838,719 or 16 percent of the total estimated foundation support of higher education.

Five categories of aid supported by foundations were analyzed. Grants for each specific purpose were analyzed as a total for each individual institution. Since some foundations gave grants to the same institution for more than one purpose, the total number of purposes included in this study was more than the total number of grants to institutions. Thus, total number of grants for categories of aid were 3,104 compared with a total of 2,878 for individual institutions. Of the total number of grants for categories of aid, 1,374 were corporate foundation grants, while 1,730 were private foundation grants. Of the total number of grants to institutions, 1,627 were from private foundations and 1,250 were from corporate foundations.

Number of Institutions and Student Enrollment at Types of Institutions in Carnegie Classification

Table 9 shows that neither the total number of types of institutions nor the total enrollment at these types of institutions was equally distributed. Among private institutions there were few research or doctorate universities when viewed by either enrollment or by number of institutions. Comprehensive universities and colleges were 9.6 percent of the total number and 7.4 percent of the total enrollment. While slightly more than half the number of private colleges were liberal arts institutions, these institutions had only approximately 25 percent of the total enrollment of private institutions. Private two-year colleges were 9.5 percent of the total number of all institutions but only 1.4 percent of the total enrollment was at these colleges. The majority of institutions (55 percent) were public. These public colleges and universities accounted for the majority (80.1 percent) of student enrollment.

TABLE 9

NUMBER OF INSTITUTIONS AND STUDENT ENROLLMENT AT TYPES OF INSTITUTIONS IN CARNEGIE CLASSIFICATION

Type of Institution	Number of Institutions		Student Enrollment	
	Total	Percent	Total In Thou.	Percent
Private				
Research Univ.	36	1.4	402.9	3.8
Doctorate Univ.	29	1.2	270.5	2.5
Comprehensive Univ. and colleges	240	9.6	796.9	7.4
Liberal arts coll.	572	22.8	511.7	4.8
Two-year colleges	238	9.5	152.8	1.4
Total private	1,115	44.5	2,134.8	19.9
Total public	1,393	55.5	8,600	80.1
Total	2,508	100.0	10,734.8	100.0

SOURCE: Carnegie Commission on Higher Education. A Classification of Institutions of Higher Education. Berkeley, Calif.: Carnegie Foundation for the Advancement of Teaching, 1976: p. xii.

Overview of Grants in Relation to Foundation Variables

Overview of Corporate and Private Foundation Support of Higher Education

As Table 10 shows, very different patterns could be seen in corporate and private foundation giving. While corporate foundations accounted for 26.8 percent of the sample in this study, they gave 43.4 percent of the total number of grants to institutions of higher education. The average number of grants from each corporate foundation was almost fifteen. This compared with an average of slightly over seven grants to institutions of higher education from each private foundation. Thus individual corporate foundations on the average gave twice as many grants in terms of the number of grants as did individual private foundations.

Looking at the dollar support of institutions of higher education, the picture was radically different. Private foundations accounted for 92.3 percent of the total dollars given to institutions of higher education in this study, compared to only 7.7 percent from corporate foundations. The average grant to an institution of higher education from private foundations was $72,040, almost nine times the size of the average grant of $7,769 per institution from corporate foundations.

Annual total foundation grants to institutions of higher education differed greatly between the two types of foundations. Corporate foundations averaged a total of $115,583 to institutions of higher education, whereas private foundations averaged a total of $512,301.

TABLE 10

GRANTS TO HIGHER EDUCATION FROM CORPORATE AND PRIVATE FOUNDATIONS

Type of Foundation	Number of Foundations		Number of Grants			Amount of Grants			Average Amt. Per Foundation Granted to Higher Educ.
	Total	Percent	Total	Percent	Average	Total	Percent	Average	
Corporate	84	26.8	1,250	43.4	14.88	$ 9,711,147	7.7	$ 7,769	$115,608
Private	228	73.2	1,628	56.6	7.12	117,208,984	92.3	72,040	514,071
TOTAL	312	100.0	2,878	100.0		$126,920,131	100.0	$44,115	$406,793

Overview of Sample Foundations Stratified by Total Dollar Amount of Grants Awarded

While the majority (93.3 percent) of foundations awarded total grants of $3 million or less, the majority (81.1 percent) of total dollars to higher education came from those few foundations which made total grants of $3 million or more. (See table 11.) Thus twenty-one out of 312 foundations accounted for the bulk of the higher education grant dollar. The Ford Foundation by itself accounted for 22.6 percent of the higher education grant dollar.

As the total amount of grants awarded by foundations increased, so did the average annual foundation grant amount to higher education as well as the amount of the average grant. For example, while foundations which granted a total of under $100,000 averaged total giving of $15,111 to higher education with the size of the average grant being $5,791, foundations with total grants of $20 million to under $60 million averaged giving a total of $9,916,176 to higher education. The size of the Ford Foundation was far beyond the rest of the foundations with total grants of over $28 million and grants which averaged over $200,000 to institutions of higher education.

By contrast, the small grant size foundations of $3 million or under gave more grants (62.7 percent) in respect to the total number of higher education grants than did the larger foundations. They also gave fewer grants per foundation. That is, the average number of grants

TABLE 11

GRANTS TO HIGHER EDUCATION FROM FOUNDATIONS (STRATIFIED BY TOTAL DOLLAR AMOUNT OF GRANTS AWARDED)

Total Dollar Amount of Grants Awarded	Number of Foundations		Number of Grants		
	Total	Percent	Total	Percent	Average
Under $100,000	64	20.5	167	5.8	2.6
$100,000 - Under $500,000	167	53.5	770	26.8	4.6
$500,000 - Under $1 million	31	10.0	437	15.2	14.1
$1 million - Under $3 million	29	9.3	430	14.9	14.8
$3 million - Under $20 million	16	5.1	620	21.5	38.7
$20 million - Under $60 million	4	1.3	317	11.0	79.3
Over $60 million	1	0.3	137	4.8	137
Total	312	100.0	2,878	100.0	

Total Dollar Amount of Grants Awarded	Amount of Grants			Average Amt. Per Foundation Granted to Higher Educ.
	Total	Percent	Average	
Under $100,000	$ 967,106	0.8	$ 5,791	$ 15,111
$100,000 - Under $500,000	8,489,956	6.7	11,026	50,838
$500,000 - Under $1 million	5,225,019	4.1	11,957	168,549
$1 million - Under $3 million	9,316,954	7.3	21,667	321,274
$3 million - Under $20 million	34,567,760	27.2	55,845	2,160,485
$20 million - Under $60 million	39,664,703	31.3	125,125	9,916,176
Over $60 million	28,688,709	22.6	209,407	28,688,705
Total	$ 126,920,207	100.0		

NOTE: Slight variations from totals in table 10 due to rounding error.

from foundations which awarded a total of under $100,000 was 2.6 and was 14.8 from foundations which gave between $1 million to under $3 million. In contrast, foundations which awarded $3 million to under $20 million gave an average of 38.7 grants per foundation and foundations which gave $20 million to less than $60 million averaged 79.3 grants per foundation.

In summary, the 291 foundations with total grants of $3 million or less in the aggregate gave a large number of small grants but were only 18.9 percent of the total higher education grant dollar. In comparison, the twenty foundations, with grants of $3 million to under $60 million, gave much larger grants and a larger number of grants per foundation. They accounted for 32.5 percent of the total number of grants and gave 58.5 percent of the total higher education grant dollar. The Ford Foundation, in a category by itself, gave 137 grants which were 4.8 percent of the total number of grants to institutions, 22.6 percent of the total higher education grant dollar, and gave an average grant of $209,407, far above the average grant amount from any of the other foundation grant stratifications.

Overview of Sample Foundations Stratified by Asset Size

When foundation giving to higher education was analyzed in terms of foundation asset size, the same general pattern was seen as was discussed in regards to foundation giving and foundation total dollar grant size. That is, as table 12

TABLE 12

GRANTS TO HIGHER EDUCATION FROM FOUNDATIONS STRATIFIED BY ASSET SIZE

Asset Size	Number of Foundations		Number of Grants		
	Total	Percent	Total	Percent	Average
Under $1 million	49	15.7	299	10.4	6.1
$1 million - Under $5 million	157	50.3	758	26.3	4.8
$5 million - Under $10 million	53	17.0	390	13.6	7.4
$10 million - Under $25 million	21	6.7	283	9.8	13.5
$25 million - Under $100 million	19	6.1	237	8.2	12.5
$100 million - Under $2 billion	12	3.9	774	26.9	64.4
Over $2 billion	1	0.3	137	4.8	137
Total	312	100.0	2,878		

Asset Size	Amount of Grants			Average Amt. Per Foundation Granted to Higher Educ.
	Total	Percent	Average	
Under $1 million	$ 2,903,153	2.3	$ 9,710	$ 59,248
$1 million - Under $5 million	9,129,370	7.2	12,044	58,149
$5 million - Under $10 million	5,809,458	4.6	14,896	109,612
$10 million - Under $25 million	4,072,191	3.2	14,389	193,914
$25 million - Under $100 million	10,779,386	8.5	17,182	567,366
$100 million - Under $2 billion	65,537,924	51.6	84,784	5,461,494
Over $2 billion	28,688,705	22.6	209,407	28,688,705
Total	$126,920,187	100.0		

NOTE: Slight variations from totals in table 10 due to rounding error.

shows, the majority (89.7 percent) of foundations had total assets of less than $25 million. They gave 60.1 percent of the total number of grants but gave only 17.3 percent of the total dollars given to higher education. Their average number of grants ranged from 6.1 for foundations with less than $1 million assets to 13.5 for foundations with assets of $10 million to under $25 million. The size of the average grant varied from $9,710 for foundations with assets of less than $1 million to $14,389 for foundations with assets of $10 million to $25 million.

In contrast, the remaining thirty-two foundations (10.3 percent of the total number) gave 39.9 percent of the total number of grants and 82.7 percent of the total higher education grant dollar. The twelve foundations in the asset range of $100 million to under $2 billion stand out in particular since they gave 51.6 percent of all of the money donated to higher education in FY 1975. The average grant was $84,784 while the average annual total amount given was almost $5.5 million. Although the Ford Foundation was only 0.3 percent of the total number of foundations, its grants amounted to 22.6 percent of the total higher education grant dollar. For those fortunate enough to receive a Ford Foundation grant, the average amount was almost $210,000.

In summary, the higher education grant dollar was predominantly given by foundations possessing assets of $25 million or more. In comparison with smaller asset foundations, these thirty-two foundations gave larger grants and larger number of grants per foundation. They accounted for 82.7 percent of the total grant dollars donated to higher education. The 280 foundations with assets of less than $25 million in the aggregate gave a large number of small grants. Individually they averaged much smaller grants both in terms of number and dollar value when contrasted to large asset foundations.

Overview of Total Grants for Categories of Aid

Table 13 shows there was a large variation in both the total grant amount and in the number of grants given to the five categories of aid analyzed in this report. Of total grant dollars, almost half the amount went to special purpose grants. Special purpose grants, however, received only 26.2 percent of the total number of grants. Therefore, they tended to be of a large dollar size, averaging $77,732. The proportions were almost reversed for operating expense grants. This category received 23 percent of the total grant dollar but was slightly over 50 percent of the total number of grants. Therefore, they tended to be of a smaller average dollar size, $18,725.

TABLE 13

GRANTS FOR CATEGORIES OF AID

Category of Aid	Amount of Grants Total	Amount of Grants Percent	Amount of Grants Average	Number of Grants Total	Number of Grants Percent
Scholarships	$ 6,012,557	4.7	$ 12,346	487	15.7
Capital	27,465,687	21.7	118,387	232	7.5
Endowments	1,323,717	1.0	110,310	12	0.4
Operating Expense	29,155,415	23.0	18,725	1,557	50.2
Special Purpose	62,962,701	49.6	77,732	816	26.2
Total	$126,920,077	100.0		3,104	100.0

A major problem in classifying grants should be noted here. As Rooks pointed out in his study (49:1.) some foundation IRS 990 AR reports did not describe the grant purpose and instead only listed the grant amount and grant recipient. In these cases, the grant was classified as having been given for operating expenses although it may actually have been given for another purpose. Because of this, it is possible that the operating expense category may have been overestimated and some of the other categories underestimated.

Capital grants received 21.7 percent of the total grant dollars but only 7.5 percent of the total grant number. Their average dollar amount of $118,387 was the highest average for any category of aid. Endowments were the next largest in terms of average grant size ($110,310) but very few grants in respect to either dollars (1 percent of the total) or number (0.4 percent) went for endowments.

Scholarships and other student aid purposes received a low proportion of total grant amount (4.7 percent of the total grants given), total number of grants (15.7 percent of the number of grants given), and average grant amount ($12,346).

When categories of aid were viewed by stratifications of the dollar amount of grants (see table 14), it could be seen that there was an inverse relationship between the dollar amount per grant range and the number of grants per range. That is, 68 percent of the grants were for $100,000 or above but they were only 10 percent of the total grant number. In contrast, 6.5 percent of the total grants were for under $15,000 but these grants were 63.6 percent of the total grant number. Therefore, the majority of grants were for relatively small amounts.

TABLE 14

GRANTS FOR CATEGORIES OF AID

(STRATIFIED BY DOLLAR AMOUNT OF GRANTS)

Total Grants (In Dollars)	Amount of Grants		Number of Grants	
	Total	Percent	Total	Percent
Under 15,000	$ 8,217,933	6.5	1,972	63.6
15,000 - 24,999	4,168,796	3.3	222	7.2
25,000 - 49,999	9,571,893	7.5	307	9.9
50,000 - 99,999	18,587,585	14.6	295	9.5
100,000 - 499,999	45,088,033	35.5	257	8.3
500,000 - 999,999	26,567,883	20.9	40	1.3
Over 1 million	14,717,954	11.6	11	0.4
Total	$126,920,077	99.9	3,104	100.2

Overview of Total Multiple Year Grants

Grants divided into amounts given over two or more years were designated as multiple year grants. Of the total grant dollars to higher education, almost 30 percent went for multiple year grants. In relation to access to foundation grants by a new applicant, this meant 30 percent of the total higher education grant dollar was not available for new applicants since this money was committed over a period of time. Because only 13.1 percent of the total number of grants were for multiple years, the average tended to be rather high, $92,520. (See table 15.)

TABLE 15

RELATIONSHIP OF MULTIPLE YEAR GRANTS TO TOTAL GRANTS

	Amount of Grants		Number of Grants	
	Total	Percent	Total	Percent
Multiple Year Grants	$ 37,566,777	29.6	406	13.1
Total Grants	$126,920,077	100.0	3,104	100.0

When viewed by grant ranges, the same inverse relationship between number of grants and total dollar amounts given that was seen for categories of aid held for multiple year grants; i.e., although 76.4 percent of the total number of mutliple year grants were for less than $100,000, 71.1 percent of the total grants were for $100,000 or above. (See table 16.)

TABLE 16

GRANTS FOR MULTIPLE YEAR GRANTS

(STRATIFIED BY DOLLAR AMOUNT OF GRANTS)

Total Grants (In Dollars)	Amount of Grants		Number of Grants	
	Total	Percent	Total	Percent
Under 15,000	$ 640,587	1.7	89	21.9
15,000 - 24,999	858,378	2.3	45	11.1
25,000 - 49,999	2,398,225	6.4	73	18.0
50,000 - 99,999	6,958,555	18.5	103	25.4
100,000 - 499,999	15,490,773	41.2	82	20.2
500,000 - 999,999	8,486,695	22.6	12	3.0
Over 1 million	2,733,564	7.3	2	0.5
Total	$37,566,777	100.0	406	100.1

Overview of Grants in Relation to Foundation Geographical Orientation

Foundations were classified into three geographical orientations, local, regional, or national, on the basis of where their grant recipients were located. If 80 percent of grant recipient locations were in a specific metropolitan area or state, the foundation was defined as having a local orientation. If 80 percent of grant recipient locations were in up to three of the nine geographical regions in table 7, the foundation was defined as having a regional orientation. National orientation was defined as 80 percent of grants given to recipients in four or more of the nine geographical regions in table 7.

Of the total number of sample foundations, 44.2 percent were local, 40.1 percent were regional, and 15.7 percent were national. The Foundation Directory, edition six, said, "Of the 2,818 foundations comprising the universe of the Directory, 1,825 are locally oriented and 993 are regional or national in their patterns of grant making." (25:xii.) This would mean 64.8 percent were local while 35.2 percent were regional or national. The Directory did not contain a precise definition of regional or national giving, however.

Again, an inverse relationship could be seen in the obtained data. (see table 17.) In this case, the inverse relationship was between the total number of local and regional foundations (84.3 percent) and the percent of higher education grant dollars (23.1 percent) given by these founda-

TABLE 17

GRANTS TO HIGHER EDUCATION FROM LOCAL, REGIONAL, AND NATIONAL FOUNDATIONS

	Number of Foundations		Number of Grants			Amount of Grants			Average Amt. Per Foundation Granted to Higher Educ.
	Total	Percent	Total	Percent	Average	Total	Percent	Average	
Local	138	44.2	351	12.2	2.5	$ 10,582,096	8.3	$30,148	$ 76,682
Regional	125	40.1	714	24.8	5.7	18,845,095	14.8	26,394	150,761
National	49	15.7	1,813	63.0	37.0	97,492,856	76.9	53,804	1,989,650
Total	312	100.0	2,878	100.0	9.2	$126,920,047	100.0	$44,115	$ 406,793

NOTE: Slight variations from totals in table 10 due to rounding error.

tions. In contrast, national foundations, while only 15.7 percent of the total number of foundations, gave 76.8 percent of the total higher education grant dollars. They also gave the majority of the total number of grants, 63.0 percent, and averaged thirty-seven grants per foundation in contrast to the average of 2.5 from local foundations and 5.7 from regional foundations.

As the geographical orientation of a foundation broadened, so did the annual total foundation grant amount to higher education. Local foundations averaged a total of $76,682 to higher education, regional foundations averaged $150,761, while national foundations averaged giving $1,989,650. Local foundations gave larger average grants ($30,148) than did regional foundations ($26,394). National foundations averaged considerably more than either regional or local foundations, $53,804.

When foundation geographical orientation was divided into types of foundations (private and corporate), different patterns emerged for private and corporate foundations. (See table 18.) In proportion to the total number of private and corporate foundations, more (49.6 percent) private foundations were local than were corporate (29.8 percent). Both types had approximately the same number giving on a regional basis, 39 percent for private and 42.9 percent for corporate. Nationally, there were a greater proportion of corporate foundations (27.4 percent) in relation to total corporate foundations, than there were private foundations (11.4 percent) in relation to total private foundations.

TABLE 18

GRANTS TO HIGHER EDUCATION IN RELATION TO GEOGRAPHICAL ORIENTATION OF PRIVATE AND CORPORATE FOUNDATIONS

	Number of Foundations				Number of Grants					
	Private		Corporate		Private			Corporate		
	Total	Percent	Total	Percent	Total	Percent	Average	Total	Percent	Average
Local	113	49.6	25	29.8	274	16.7	2.4	77	6.4	3.1
Regional	89	39.0	36	42.9	473	29.1	5.3	241	19.3	6.1
National	26	11.4	23	27.4	880	54.1	33.8	932	74.6	40.5
Total	228	73.2	84	26.8	1,627	56.6	7.2	1,250	43.4	14.88

	Amount of Grants						
	Private			Corporate			
	Total	Percent	Average	Total	Percent	Average	Total
Local	$ 9,891,902	8.4	$ 36,390	$ 690,194	7.1	$ 8,964	$ 10,582,096
Regional	16,275,063	13.9	34,408	2,570,032	26.5	10,664	18,845,095
National	91,041,957	77.7	103,457	6,450,899	66.4	6,922	97,492,856
Total	$117,208,922	92.4	$ 72,062	$9,711,125	7.6	$ 7,767	$126,920,047

	Average Amount Per Foundation Granted to Higher Education	
	Private	Corporate
Local	$ 87,273	$ 27,608
Regional	182,866	71,390
National	3,501,614	280,471
Total	$ 512,301	$115,583

NOTE: Slight variations from totals in table 10 due to rounding error.

Although there were more national corporate foundations than national private foundations in relation to their total numbers, the picture changed completely when the total grant dollar to higher education was viewed. The majority of both the private and corporate grant dollars to higher education came from national foundations: 77.7 percent of the private grant dollars came from national foundations and 66.4 percent of the corporate grant dollars came from corporate foundations with a national orientation. Although both types had approximately the same proportion which gave on a regional basis, corporate foundations gave 26.5 percent of their grant dollars from regional foundations while private foundations gave only 13.9 percent regionally. Local foundations accounted for approximately the same percent of the total giving from private (8.4 percent) and corporate (7.1 percent) foundations.

Overview of Grants in Relation to Foundation Geographical Location

As previously discussed, foundation locations were divided into nine geographical regions on the basis of the classification used in the Foundation Directory, edition six. Both the number of foundations and the amount of foundation assets were concentrated in regions one and two. Therefore, it was expected the majority of grants would come from foundations in these two areas. The results showed that almost 57 percent of the number of sample foundations were located in these two areas. (see table 19.) The

TABLE 19

GRANTS TO HIGHER EDUCATION FROM FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS

Geographical Region	Number of Foundations		Number of Grants			Amount of Grants			Average Amt. Per Foundation Granted to Higher Educ.
	Total	Percent	Total	Percent	Average	Total	Percent	Average	
1	102	33.8	1,404	48.8	13.8	$ 59,118,983	46.6	$42,138	$579,598
2	72	23.1	674	23.4	9.4	42,902,916	33.8	63,654	595,874
3	21	6.7	133	4.6	6.3	7,177,195	5.7	53,964	341,771
4	37	11.9	227	7.9	6.1	5,430,803	4.3	23,924	146,778
5	32	10.3	160	5.6	5.0	2,711,045	2.1	16,944	84,720
6	22	7.1	139	4.8	6.3	5,451,980	4.3	39,223	247,817
7	15	4.8	95	3.3	6.3	1,557,254	1.2	16,392	103,817
8	5	1.6	32	1.1	6.4	2,316,158	1.8	72,380	463,232
9	5	1.6	14	.5	2.8	253,241	.2	18,089	50,648
	312	100.9	2,878	100.0		$126,919,575	100.0		

NOTE: Slight variations from totals in table 10 due to rounding error.

majority of higher education grants, both dollar amount (80.4 percent) and grant number (72.2 percent), came from foundations in regions one and two. Foundations in regions three through nine gave from 0.5 percent to 7.9 percent of the remaining total number of grants and gave 0.2 percent to 5.7 percent of the remaining total higher education grant dollar.

Looking at the average number of grants showed foundations in region one had the highest average number of grants, 13.8. Region two had the second highest, 9.4. Foundations in regions three through eight averaged between 5 and 6.4 grants per foundation while foundations in region nine had the lowest average number, 2.8.

The picture changed when the amount of the average total grant dollar to higher education was viewed. Foundations in regions one and two gave on the average a total of $579,598 and $595,874 respectively. Foundations in region eight had the next highest average, $463,232. Foundations in regions five and nine gave the lowest average annual total foundation amounts to higher education, $84,720 and $50,648 respectively. When the size of the average grant was analyzed, region eight averaged the largest amount, $72,380, region two averaged the next largest grant size, $63,654, while regions five and nine gave the lowest average grants, $16,944 and $18,089 respectively.

As mentioned, 80.4 percent of all higher education grant dollars came from regions one and two. This overall high percentage was true of both private and corporate foundations. As table 20 shows, 80.5 percent of all private foundation giving was in regions one and two while 79.3 percent of all corporate foundation giving was in regions one and two.

The majority of the higher education foundation grant dollar was from private foundations in all regions. In regions one through eight, 85.3 percent to 95.7 percent of the total grant dollar was from private foundations. The lowest proportion of private to corporate giving was in region nine where 76 percent of total giving was from private foundations and 24 percent was from corporate foundations. This region overall accounted for only 0.2 percent of the total foundation grant dollar to higher education.

Viewing table 21, it can be seen that in regions one and two a high proportion of total foundation giving was from foundations with a national geographical orientation. Region one accounted for 56.2 percent of the total national foundation grant dollar to higher education while region two gave 38.3 percent of the total national foundation grant dollar to higher education. Of total national foundation giving to institutions of higher education, 94.5 percent was attributable to foundations in regions one and two combined. Regions three through nine were responsible for 0.0 percent to 2.0 percent of giving from foundations with a national orientation.

Three regions gave the majority of their higher education grant dollar nationally. Region one gave 92.7 percent

TABLE 20

GRANTS TO HIGHER EDUCATION FROM PRIVATE AND CORPORATE FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS

Geographical Region	Private Foundation		
	Total	Percent of Total Grant Dollar	Percent of Total Region Grant Dollar
1	$ 53,897,594	46.0	91.2
2	40,426,789	34.5	94.2
3	6,805,883	5.8	94.8
4	4,631,996	4.0	85.3
5	2,508,594	2.1	92.5
6	5,133,719	4.4	94.2
7	1,490,503	1.3	95.7
8	2,120,976	1.8	91.6
9	192,400	0.2	76.0
Total	$ 117,208,250		

TABLE 20 - Continued

Geographical Region	Corporate Foundations			Total	
	Total	Percent of Total Grant Dollar	Percent of Total Region Grant Dollar	Amount	Percent
1	$ 5,221,394	53.8	8.8	$ 59,118,988	46.6
2	2,476,108	25.5	5.8	42,902,897	33.8
3	371,300	3.8	5.2	7,177,183	5.7
4	798,801	8.2	14.7	5,430,797	4.3
5	202,450	2.1	7.5	2,711,044	2.1
6	318,246	3.3	5.8	5,451,965	4.3
7	66,750	0.7	4.3	1,557,253	1.2
8	195,182	2.0	8.4	2,316,158	1.8
9	60,841	0.6	24.0	253,241	0.2
Total	$ 9,711,059			$ 126,919,209	

NOTE: Slight variations from totals in table 10 due to rounding error.

TABLE 21

GRANTS TO HIGHER EDUCATION FROM LOCAL, REGIONAL, AND NATIONAL FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS

	Local Foundations: Grant Dollar			Regional Foundations: Grant Dollar		
Region	Total	% of Local Found. Grant Dollar	% of Tot. Region Grant Dollar	Total	% of Regional Found. Grant Dollar	% of Tot. Region Grant Dollar
1	$ 834,646	7.9	1.4	$ 3,470,083	18.5	5.9
2	1,125,705	10.6	2.6	4,373,023	23.3	10.2
3	932,950	8.8	13.0	5,738,145	30.6	79.9
4	4,357,452	41.2	80.2	620,991	3.3	11.4
5	616,979	5.8	22.8	1,589,452	8.5	58.6
6	2,403,300	22.7	44.1	1,845,620	9.8	33.9
7	147,000	1.4	9.4	680,624	3.6	43.7
8	137,125	1.3	5.9	207,932	1.1	8.9
9	26,941	0.3	10.3	226,300	1.2	89.4
Total	$10,582,098			$18,752,170		

TABLE 21 - Continued

Region	National Foundations: Grant Dollar			Total
	Total	% of National Found. Grant Dollar	% of Tot. Region Grant Dollar	
1	$54,814,254	56.2	92.7	$ 59,118,983
2	37,404,188	38.3	87.2	42,902,916
3	506,100	0.5	7.1	7,177,195
4	452,360	0.5	8.3	5,430,803
5	504,614	0.5	18.6	2,711,045
6	1,203,060	1.2	22.1	5,451,980
7	729,630	0.7	46.9	1,557,254
8	1,971,101	2.0	85.1	2,316,158
9	. . .	. . .	. . .	253,241
Total	$97,585,307			$126,919,575

NOTE: Slight variations from totals in table 10 due to rounding error.

of all its higher education money nationally; region two, 87.2 percent; region eight, 85.1 percent. Region seven gave 46.9 percent nationally and 43.7 percent regionally. The foundations in the remaining regions gave between 0.0 percent and 22.1 percent nationally out of their total grant dollar to higher education.

Foundations which gave on a regional basis gave more evenly, with each region accounting for 1.1 percent to 30.6 percent of all dollars given by regionally oriented foundations. Certain regions gave a high proportion of their grant dollar regionally. Foundations in region nine gave 89.4 percent regionally out of their total higher education grant dollar while foundations in region three gave 79.9 percent regionally. Other regions which gave a high proportion of their total grant dollar on a regional basis were region five (58.6 percent), region seven (43.7 percent), and region six (33.9 percent).

Two regions accounted for the majority (63.9 percent) of all local foundation grant dollars to higher education. Region four gave 41.2 percent of the total local foundation grant money while region six gave 22.7 percent. Region four gave 80.2 percent of all its higher education money to local institutions while region six gave 44.1 percent in this manner. Foundations in the remaining regions gave 22.8 percent or less locally out of their total grant dollar.

Number of Foundations Which Gave One or More Grants to Types of Institutions in Relation to Each Independent Variable

Introduction

The number of foundations which gave a minimum of one grant to each type of institution was determined. The types of institutions included research universities, doctorate universities, comprehensive universities and colleges, liberal arts colleges, two-year colleges, and public institutions, with the special category of black institutions. Chi-square was used as a test of statistical significance to find out whether there was a relationship between the expected and observed number of foundations giving one or more grants to each type of institution; i.e., whether the theoretical proportions in each cell were equal to the proportions that were obtained in the study. The hypothesis (H_0) that the distribution of the number of foundations giving one or more grants to each of the types of institutions was evenly distributed was tested against the hypothesis (H_1) that the number of foundations giving one or more grants to each type of institution was not evenly distributed. Chi-square analysis did not include black institutions because these institutions were identified by a separate method of analysis after they had been counted in each of the classifications of types of institutions.

Number of Foundations Which Gave One or More Grants to Types of Institutions

From table 22 it can be seen that slightly more than 50 percent of the total of 312 foundations gave one or more grants to the categories of research, comprehensive, liberal arts, and public institutions. Slightly more than a quarter of the foundations gave at least one grant to doctoral institutions, slightly less than a fifth gave a grant to black institutions, and less than 10 percent gave a grant to two-year colleges.

TABLE 22

TOTAL NUMBER OF FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	Number of Foundations Total	Percent
Research	172	55.1
Doctoral	80	25.6
Comprehensive	158	50.6
Liberal Arts	173	55.4
Two-Year	30	9.6
Public	173	55.4
Black	60	19.2

A chi-square test (table 23) showed these differences to be significant at the .001 level of confidence. Therefore, it was concluded there was a significant difference in the total number of foundations which gave one or more grants to each type of institution.

TABLE 23

CHI-SQUARE ANALYSIS OF TOTAL NUMBER OF FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	172	131	12.83
Doctoral	80	131	19.85
Comprehensive	158	131	5.56
Liberal Arts	173	131	13.46
Two-Year	30	131	77.87
Public	173	131	13.46
Total	786		143.03

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 143.03$

Reject H_o. There was a significant difference in the total number of foundations which gave one or more grants to types of institutions.

This significant difference was attributable to the giving patterns of foundations to doctoral and two-year institutions rather than to the other four types of institutions. When a chi-square test was calculated for only research, comprehensive, liberal arts, and private institutions, it was not significant (see table 24). Therefore, there was no significant difference in the total number of foundations giving one or more grants to these four types of institutions but only a significant difference when two-year and doctoral institutions were included in the analysis.

TABLE 24

CHI-SQUARE ANALYSIS OF TOTAL NUMBER OF FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS TO FOUR TYPES OF INSTITUTIONS

Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	172	169	.05
Comprehensive	158	169	.72
Liberal Arts	173	169	.09
Public	173	169	.09
Total	676		.95

For $\alpha = .05$ with 3 degrees of freedom need $X^2 = 7.82$

$X^2 = .95$

Fail to reject H_o. There was not a significant difference in the total number of foundations which gave one or more grants to types of institutions.

Number of Private and Corporate Foundations Which Gave One or More Grants to Types of Institutions

Private and corporate foundations both made grants to all types of institutions. (See table 25.) However, the

TABLE 25

NUMBER OF PRIVATE AND CORPORATE FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	Private Foundations		Corporate Foundations		Total
	Total	Percent	Total	Percent	
Research	118	51.8	54	64.3	172
Doctoral	45	19.7	35	41.7	80
Comprehensive	100	43.9	58	69.0	158
Liberal Arts	121	53.1	52	61.9	173
Two-Year	22	9.6	8	9.5	30
Public	115	50.4	58	69.0	173
Black	38	16.7	22	26.2	60

number of private and corporate foundations which made grants in relation to each type of institution varied considerably. Approximately 50 percent of private foundations made at least one grant to research, liberal arts, and public institutions while approximately 44 percent made a grant to a comprehensive institution. However, less than 20 percent made grants to doctoral institutions or to black institutions and less than 10 percent made a grant to two-year institutions.

In comparison, more corporate foundations appeared to have made one or more grants to the various types of institutions, with the exception of two-year institutions. That is, between 60 and 69 percent made grants to research, comprehensive, liberal arts and public institutions in comparison to the approximately 50 percent of private foundations that made similar grants. While less than 20 percent of private foundations made a grant to doctoral institutions, over 40 percent of corporate foundations made this type of grant. Almost 17 percent of private foundations made a grant to black institutions whereas almost 27 percent of corporate foundations gave one or more grants to a black institution. Approximately 9.5 percent of both private and corporate foundations made a grant to two-year colleges, by far the smallest number of foundations supporting any of the types of institutions.

A chi-square analysis, shown in table 26, on the number of private and corporate foundations which gave one or more

TABLE 26

CHI-SQUARE ANALYSIS OF NUMBER OF PRIVATE AND CORPORATE FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

	Private Foundations		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	118	87	11.05
Doctoral	45	87	20.28
Comprehensive	100	87	1.94
Liberal Arts	121	87	13.29
Two-Year	22	87	48.56
Public	115	87	9.01
Total	521		104.13

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$
$X^2 = 104.13$

Reject H_o. Private foundation grants were not equally distributed among types of institutions.

	Corporate Foundations		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	54	44	2.27
Doctoral	35	44	1.84
Comprehensive	58	44	4.45
Liberal Arts	52	44	1.45
Two-Year	8	44	29.45
Public	58	44	4.45
Total	265		43.91

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$
$X^2 = 43.91$

Reject H_o. Corporate foundation grants were not equally distributed among types of institutions.

grants to each of the six types of institutions came out significant at the .001 level. Therefore, it was concluded that both private foundation grants and corporate foundation grants were not equally distributed among types of institutions.

Number of Foundations (Stratified by Total Dollar Amount of Grants Awarded) Which Gave One or More Grants to Types of Institutions

As previously mentioned, foundations were stratified into seven ranges of total grants awarded. Table 10 contains these grant stratifications as well as the number of foundations in each stratification. It can be seen that the total number of foundations in each stratification decreased as the total number of grants awarded increased.

In general, the percent of foundations which gave one or more grants to each type of institution increased as the amount of the total grants awarded increased. The major exception to this was that the one foundation which awarded total grants of over $60 million (the Ford Foundation) did not fund any two-year colleges. (see table 27.) In contrast, black institutions provided the most striking instance of the general trend. Less than 5 percent of foundations with total grant awards of under $100,000 made a grant to a black institution, slightly more than 20 percent of foundations in the total grants awarded range of $500,000 to under $3 million made a grant to a black institution whereas all foundations which granted over a total

TABLE 27

NUMBER OF FOUNDATIONS (STRATIFIED BY TOTAL DOLLAR AMOUNT OF GRANTS AWARDED) WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	Total Dollar Amount of Grants Awarded							
	Under $100,000		$100,000 - Under $500,000		$500,000 - Under $1 million		$1 million - Under $3 million	
	Number of Foundations		Number of Foundations		Number of Foundations		Number of Foundations	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Research	21	32.8	85	50.9	25	80.6	23	79.3
Doctoral	7	10.9	39	23.4	8	25.8	12	41.4
Comprehensive	15	23.4	83	49.7	20	64.5	22	75.9
Liberal Arts	29	45.3	83	49.7	23	74.2	21	72.4
Two-Year	5	7.8	10	6.0	5	16.1	5	17.2
Public	25	39.1	94	56.3	15	48.4	20	69.0
Black	3	4.7	27	16.2	7	22.6	8	27.6

Type of Institution	Total Dollar Amount of Grants Awarded					
	$3 million - Under $20 million		$20 million - Under $60 million		Over $60 million	
	Number of Foundations		Number of Foundations		Number of Foundations	
	Total	Percent	Total	Percent	Total	Percent
Research	13	81.3	4	100.0	1	100.0
Doctoral	9	56.3	4	100.0	1	100.0
Comprehensive	13	81.3	4	100.0	1	100.0
Liberal Arts	12	75.0	4	100.0	1	100.0
Two-Year	3	18.8	2	50.0	. . .	. . .
Public	14	87.5	4	100.0	1	100.0
Black	10	62.5	4	100.0	1	100.0

of $20 million made at least one grant to a black college or university.

A second characteristic was the fact that in most stratifications of total grants awarded research, comprehensive, liberal arts, and public institutions received grants from a greater percentage of foundations than did doctoral, two-year, or black institutions. This trend began to break down for doctoral and black institutions in the upper grant stratifications but consistently held true for two-year colleges.

Chi-square was computed for six stratifications of foundations by total dollar amount of grants awarded. Foundations which awarded $20 million to $60 million and the one foundation which awarded over $60 million were combined because chi-square cannot be computed if there are less than five in a cell. In general, throughout this study, if there were less than five in a cell and the cell could logically be combined with another, chi-square was computed for the combination. However, in some cases the cells could not be combined in a logical way. In these instances chi-square was not computed for that particular cell.

As table 28 shows, for each of the first three grant stratifications (Under $100,000; $100,000 to under $500,000; $500,000 to under $1 million) the chi-square came out significant at the .001 level. For foundations which granted from $1 million to under $3 million, the chi-square was significant at the .02 level. Therefore, it was concluded that grants from foundations which made total grants of under \$3 million were not equally distributed among types of institutions.

TABLE 28

CHI-SQUARE ANALYSIS OF NUMBER OF FOUNDATIONS (STRATIFIED BY TOTAL DOLLAR AMOUNT OF GRANTS AWARDED) WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

	Total Grants Awarded: Under \$100,000		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	21	17	.94
Doctoral	7	17	5.88
Comprehensive	15	17	.24
Liberal Arts	29	17	8.47
Two-Year	5	17	8.47
Public	25	17	3.76
Total	102		27.76

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 27.76$

Reject H_o. Grants from foundations which awarded under \$100,000 were not equally distributed among types of institutions.

TABLE 28 - Continued

Type of Institution	Total Grants Awarded: $100,000 - Under $500,000		
	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o - f_T)^2}{f_T}$
Research	85	66	5.47
Doctoral	39	66	11.05
Comprehensive	83	66	4.38
Liberal Arts	83	66	4.38
Two-Year	10	66	45.83
Public	94	66	11.88
Total	394		82.99

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 82.99$

Reject H_0. Grants from foundations which awarded $100,000 to under $500,000 were not equally distributed among types of institutions.

Type of Institution	Total Grants Awarded: $500,000 - Under $1 million		
	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o - f_T)^2}{f_T}$
Research	25	16	5.06
Doctoral	8	16	4.0
Comprehensive	20	16	1.0
Liberal Arts	23	16	3.06
Two-Year	5	16	7.56
Public	15	16	.06
Total	96		20.74

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 20.74$

Reject H_0. Grants from foundations which awarded $500,000 to under $1 million were not equally distributed among types of institutions.

TABLE 28 - Continued

Type of Institution	Total Grants Awarded: $1 million - Under $3 million f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	23	17	2.12
Doctoral	12	17	1.47
Comprehensive	22	17	1.47
Liberal Arts	21	17	.94
Two-Year	7	17	8.47
Public	20	17	.53
Total	103		15.0

For $\alpha = .02$ with 5 degrees of freedom need $X^2 = 13.39$

$X^2 = 15.0$

Reject H_0. Grants from foundations which awarded $1 million to under $3 million were not equally distributed among types of institutions.

Type of Institution	Total Grants Awarded: $3 million - Under $20 million f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	13	12	.08
Doctoral	9	12	.75
Comprehensive	13	12	.08
Liberal Arts	12	12	. . .
Two-Year	3*	. . .	. . .
Public	14	12	.33
Total	61		1.24

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 1.24$

Fail to reject H_0. Grants from foundations which awarded $3 million to under $20 million were equally distributed among types of institutions (excluding two-year colleges).

TABLE 28 - Continued

Type of Institution	Total Grants Awarded: Over $20 million f_o Observed Frequency	 f_T Theoretical Frequency	 $\frac{(f_o-f_T)^2}{f_T}$
Research	5	5	. . .
Doctoral	5	5	. . .
Comprehensive	5	5	. . .
Liberal Arts	5	5	. . .
Two-Year	2*	. . .	. . .
Public	5	5	
Total	25		

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For α = .05 with 4 degrees of freedom need $X^2 = 9.49$. $X^2=0$ Fail to reject H_o. Grants from foundations which awarded over $20 million were equally distributed among types of institutions (excluding two-year colleges).

For foundations which awarded a total of $3 million to under $20 million the chi-square was not significant. Similarly, chi-square was not significant for foundations which granted a total of over $20 million. It was concluded that grants from foundations which awarded $3 million and over were equally distributed among the five types of institutions analyzed, with two-year colleges being excluded from this analysis.

Number of Foundations (Stratified by Asset Size) Which Gave One or More Grants to Types of Institutions

Seven foundation asset size stratifications were used. Details about these stratifications were analyzed in table 11.

While there were clear differences in giving patterns when foundations were analyzed in terms of total grants awarded, (see table 29) the trends and differences were not nearly as clear when foundations were analyzed by their asset sizes. Two trends did emerge. Again private two-year colleges clearly were funded by fewer foundations in each asset stratification when compared to the number of foundations that funded the other types of institutions. The second trend was that the number of foundations which funded black institutions became greater as the asset size of foundations increased. Black institutions were funded by between 10.2 percent and 22.6 percent of foundations with assets under $25 million. The percentage of foundations which funded black institutions then increased with foundation asset size; i.e., 36.8 percent of foundations with an asset size of $25 million to under $100 million funded black institutions, 75 percent of foundations with assets of $100 million to under $2 billion funded black institutions, and the Ford Foundation (the only foundation with assets of over $2 billion) supported black institutions.

The chi-square analysis provided an answer as to why trends and differences in giving patterns of foundations as

TABLE 29

NUMBER OF FOUNDATIONS (STRATIFIED BY ASSET SIZE) WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

	Asset Size							
	Under $1 million		$1 million - Under $5 million		$5 million - Under $10 million		$10 million - Under $25 million	
	Number of Foundations		Number of Foundations		Number of Foundations		Number of Foundations	
Type of Institution	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Research	28	57.1	72	45.9	30	56.6	16	76.2
Doctoral	14	28.6	25	15.9	14	26.4	6	28.6
Comprehensive	33	67.3	53	33.8	32	60.4	14	66.7
Liberal Arts	23	46.9	80	51.0	31	58.5	15	71.4
Two-Year	4	8.2	13	8.3	2	3.8	4	19.0
Public	28	57.1	77	49.0	32	60.4	13	61.9
Black	11	22.4	16	10.2	12	22.6	4	19.0

	Asset Size					
	$25 million - Under $100 million		$100 million - Under $2 billion		Over $2 billion	
	Number of Foundations		Number of Foundations		Number of Foundations	
Type of Institution	Total	Percent	Total	Percent	Total	Percent
Research	16	84.2	9	75.0	1	100.0
Doctoral	10	52.6	10	83.3	1	100.0
Comprehensive	14	73.7	11	91.7	1	100.0
Liberal Arts	11	57.9	12	100.0	1	100.0
Two-Year	2	10.5	5	41.7	. . .	. . .
Public	12	63.2	10	83.3	1	100.0
Black	7	36.8	9	75.0	1	100.0

a function of asset size was difficult to determine. As table 30 shows, a significant chi-square was calculated only for foundations with an asset size of $1 million to under $5 million. All of the other chi-square analyses proved not to be significant at the .05 level of confidence. Therefore, it was concluded grants from foundations with an asset size of $1 million to under $5 million were not equally distributed among types of institutions whereas grants from foundations in the other asset sizes were equally distributed among types of institutions (excluding two-year colleges in most cases).

TABLE 30

CHI-SQUARE ANALYSIS OF NUMBER OF FOUNDATIONS (STRATIFIED BY ASSET SIZE) WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

	Asset Size: Under $1 million		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	28	25	.36
Doctoral	14	25	4.84
Comprehensive	33	25	2.56
Liberal Arts	23	25	.16
Two-Year	4*	. . .	. . .
Public	28	25	.36
Total	126		8.38

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 8.38$

Fail to reject H_o. Grants from foundations with assets of under $1 million were equally distributed among types of institutions (excluding two-year colleges).

TABLE 30 - Continued

	Asset Size: $1 million - Under $5 million		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	72	53	6.81
Doctoral	25	53	14.79
Comprehensive	53	53	. . .
Liberal Arts	80	53	13.75
Two-Year	13	53	30.19
Public	77	53	10.87
Total	320		76.41

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 76.41$

Reject H_0. Grants from foundations with an asset size of $1 million to under $5 million were not equally distributed among types of institutions.

	Asset Size: $5 million - Under $10 million		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	30	28	.14
Doctoral	14	28	7.0
Comprehensive	32	28	.57
Liberal Arts	31	28	.32
Two-Year	2*	. . .	. . .
Public	32	28	.57
Total	139		8.6

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 8.6$

Fail to reject H_0. Grants from foundations with assets of $5 million to under $10 million were equally distributed among types of institutions (excluding two-year colleges).

TABLE 30 - Continued

	Asset Size: $10 million - Under $25 million		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	16	13	.69
Doctoral	6	13	3.77
Comprehensive	14	13	.08
Liberal Arts	15	13	.31
Two-Year	4*	. . .	. . .
Public	13	13	. . .
Total	64		4.85

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 4.85$

Fail to reject H_0. Grants from foundations with assets of $10 million to under $25 million were equally distributed among types of institutions (excluding two-year colleges).

	Asset Size: $25 million - Under $100 million		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	16	13	.69
Doctoral	10	13	.69
Comprehensive	14	13	.08
Liberal Arts	11	13	.31
Two-Year	2*	. . .	. . .
Public	12	13	.08
Total	63		1.85

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 1.85$

Fail to reject H_0. Grants from foundations with assets of $25 million to under $100 million were equally distributed among types of institutions (excluding two-year colleges).

TABLE 30 - Continued

Type of Institution	Asset Size: Over \$100 million f_o Observed Frequency	 f_T Theoretical Frequency	 $\frac{(f_o-f_T)^2}{f_T}$
Research	10	10	. . .
Doctoral	11	10	.10
Comprehensive	12	10	.40
Liberal Arts	13	10	.90
Two-Year	5	10	2.50
Public	11	10	.10
Total	62		3.7

For $\alpha = .05$ with 5 degrees of freedom need $X^2 = 11.07$

$X^2 = 3.7$

Fail to reject H_0. Grants from foundations with assets of over $100 million were equally distributed among types of institutions.

Number of Foundations Which Gave One or More Grants for Categories of Aid to Types of Institutions

Grants for five categories of aid were included in this study. Categories of aid or grant purposes consisted of scholarships and other student financial assistance, capital purposes, endowments, operating expenses, and special purposes. Table 31 shows the differences in the percentages of foundations which supported each of these five categories of aid and also in the percentages of foundations which supported types of institutions within each category of aid.

TABLE 31

NUMBER OF FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS FOR CATEGORIES OF AID TO TYPES OF INSTITUTIONS

Type of Institution	Category of Aid									
	Scholarships		Capital Funds		Endowment		Operating Expenses		Special Purposes	
	Number of Foundations		Number of Foundations		Number of Foundations		Number of Foundations		Number of Foundations	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Research	32	10.3	17	5.4	3	1.0	131	42.0	38	12.2
Doctoral	16	5.1	8	2.6	1	0.3	55	17.6	17	5.4
Comprehensive	25	8.0	25	8.0	1	0.3	114	36.5	31	9.9
Liberal Arts	27	8.7	23	7.4	3	1.0	144	46.2	31	9.9
Two-Year	4	1.3	2	0.6	0	. . .	22	7.1	3	1.0
Public	43	13.8	16	5.1	3	1.0	130	41.7	40	12.8
Black	7	2.2	6	1.9	1	0.3	44	14.1	12	3.8

Clearly the highest percentage of foundations supported operating expenses over any other category of aid. Between 36.5 percent and 46.2 percent of foundations made one or more grants for operating expenses to research, comprehensive, liberal arts, and public institutions. Doctoral, two-year and black institutions received support from far fewer foundations for operating expenses. Less than 18 percent made one or more grants to doctoral institutions, approximately 14 percent made a grant to black institutions, and two-year colleges received support from the lowest percent of foundations, 7.1 percent. It should once again be mentioned that when grant purposes were not specified on an annual report, the grant was classified as having been given for operating expenses, which presumably increased the count of the number of grants given for this purpose.

Grants for endowments were made by the fewest number of foundations. None gave an endowment grant to a two-year college. Only 0.3 to 1 percent of the foundations gave a grant for this purpose to the remaining types of institutions.

Regarding scholarships, capital, and special purpose grants, the percent of foundations which gave one or more grants to types of institutions for these purposes ranged from 0.0 percent to less than 14 percent. Again research institutions, public institutions, comprehensive colleges and universities, and liberal arts institutions received funding from a greater percent of foundations than did doctoral, two-year, or black institutions.

The chi-square test was computed separately for each of the five categories of aid. (See table 32.) Since there were less than five two-year institutions which received one or more grants from foundations for scholarships, capital, and special purposes, chi-square was not computed for two-year colleges in these cases. Chi-square also was not calculated for endowment grants because none of the cells contained five or more foundations which gave grants.

TABLE 32

CHI-SQUARE ANALYSIS OF NUMBER OF FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS FOR CATEGORIES OF AID TO TYPES OF INSTITUTIONS

	Scholarships		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	32	29	.31
Doctoral	16	29	5.83
Comprehensive	25	29	.55
Liberal Arts	27	29	.14
Two-Year	4*	. . .	. . .
Public	43	29	6.76
Total	143		13.59

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .01$ with 4 degrees of freedom need $X^2 = 13.28$

$X^2 = 13.59$

Reject H_0. There was an unequal distribution of the number of foundations which made scholarship grants to types of institutions.

TABLE 32 - Continued

	Capital		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	17	18	.06
Doctoral	8	18	5.56
Comprehensive	25	18	2.72
Liberal Arts	23	18	1.39
Two-Year	2*	. . .	. . .
Public	16	18	.22
Total	89		9.95

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 9.95$

Reject H_0. There was an unequal distribution of the number of foundations which made capital grants to types of institutions.

	Endowment*		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	3	. . .	. . .
Doctoral	1	. . .	. . .
Comprehensive	1	. . .	. . .
Liberal Arts	3	. . .	. . .
Two-Year	0	. . .	. . .
Public	3	. . .	. . .

*X^2 was not computed for endowment grants because of the small number in each cell.

TABLE 32 - Continued

	Operating Expense		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	131	99	10.34
Doctoral	55	99	19.56
Comprehensive	114	99	2.27
Liberal Arts	144	99	20.45
Two-Year	22	99	59.89
Public	130	99	9.71
Total	596		122.22

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 122.22$

Reject H_o. There was an unequal distribution of the number of foundations which made operating expense grants to types of institutions.

	Special Purposes		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	38	31	1.58
Doctoral	17	31	6.32
Comprehensive	31	31	. . .
Liberal Arts	31	31	. . .
Two-Year	3*	. . .	. . .
Public	40	31	2.61
Total	157		10.51

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For α = .05 with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 10.51$

Reject H_o. There was an unequal distribution of the number of foundations which made special purpose grants to types of institutions.

Scholarships and other financial assistance was the first category of aid analyzed. The computed chi-square was significant at the .01 level for the five types of institutions analyzed. It was therefore concluded there was an unequal distribution in the number of foundations which made scholarship grants to types of institutions. Closer inspection of the distribution shows the significant difference was mainly attributable to the large number of foundations which gave public institutions scholarship support and to the small number of foundations which gave doctoral institutions this type of support. The number of foundations which gave scholarship grants to research, comprehensive, and liberal arts institutions was fairly equal.

Regarding capital support, the number of foundations which gave one or more grants to each type of institution was significant at the .05 level. The null hypothesis was again rejected with the conclusion that the number of foundations which gave capital grants was not equally distributed among types of institutions. As table 32 shows, however, the majority of the difference here was caused by the fact that doctoral institutions received support from far fewer foundations for capital grants than did the other types of institutions.

When operating expense grants were analyzed, the chi-square was significant at the .001 level. Therefore, it was concluded there was an unequal distribution of the number of foundations which made operating expense grants to types of institutions. This was the only chi-square for a category of aid which included two-year institutions. On close examination of table 32, however, it can be seen that almost half of the significance was due to the fact that two-year institutions received support from very few foundations in relation to the number of foundations supporting the remaining types of institutions. Doctoral institutions, while receiving support from more foundations than did two-year colleges, received grants from less than half as many foundations which supported research, comprehensive, liberal arts, and public institutions. The latter four types of institutions received operating support grants from an approximately equal number of foundations.

The chi-square calculation for special purpose grants was significant at the .05 level. Therefore, the conclusion was that there was an unequal distribution of the number of foundations which made special purpose grants to types of institutions. Here the major deviation was again attributable to doctoral institutions which received special purpose support from only seventeen foundations in comparison to the remaining four types of institutions which received support from thirty-one to forty foundations for this purpose.

In conclusion, while the chi-square tests were significant when computed for categories of aid, the main contribution to the level of significance was due to the fact that doctoral institutions received support from fewer foundations than did the other types of institutions included in the analyses. This was true for scholarships, capital support, and special purpose grants. Few foundations supported two-year colleges except in the case of operating support grants and even here two-year colleges received grants from far fewer foundations than supported research, comprehensive, liberal arts, and public colleges and universities.

Number of Foundations Which Gave One or More Multiple Year Grants to Types of Institutions

From table 33 it can be seen that only a few foundations gave multiple year grants. Of the 312 foundations included in the study, only two foundations gave multiple year grants to two-year colleges, seven gave multiple year grants to black institutions, and between thirteen and nineteen gave multiple year grants to research, doctoral, comprehensive, liberal arts and public institutions.

TABLE 33

NUMBER OF FOUNDATIONS WHICH GAVE ONE OR MORE MULTIPLE YEAR GRANTS TO TYPES OF INSTITUTIONS

	Number of Foundations	
Type of Institution	Total	Percent
Research	19	6.1
Doctoral	13	4.2
Comprehensive	14	4.5
Liberal Arts	18	5.8
Two-Year	2	0.6
Public	13	4.2
Black	7	2.2

Again, chi-square was not computed for two-year institutions because of the small number in this cell. When calculated, chi-square was not significant at the .05 level. Therefore, the null hypothesis was accepted with the conclusion that the number of foundations which gave multiple year grants were equally distributed among types of institutions, excluding two-year colleges. (See table 34.)

TABLE 34

CHI-SQUARE ANALYSIS OF NUMBER OF FOUNDATIONS WHICH GAVE MULTIPLE YEAR GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	19	13	2.77
Doctoral	13	13	. . .
Comprehensive	14	13	.08
Liberal Arts	18	13	1.92
Two-Year	2*	. . .	. . .
Public	13	13	. . .
Total	79		4.77

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 4.77$

Fail to reject H_0. The number of foundations which gave multiple year grants were equally distributed among types of institutions (excluding two-year colleges).

Number of Local, Regional, and National Foundations Which Gave One or More Grants to Types of Institutions

In general, as one looks at table 35, the percentage of foundations which supported each type of institution rose as the geographical orientation of foundations broadened. That is, a higher percentage of national foundations supported

TABLE 35

NUMBER OF LOCAL, REGIONAL, AND NATIONAL FOUNDATIONS WHICH GAVE GRANTS TO TYPES OF INSTITUTIONS

	Geographical Orientation of Foundation					
	Local		Regional		National	
	No. of Foundations		No. of Foundations		No. of Foundations	
Type of Institution	Total	Percent	Total	Percent	Total	Percent
Research	46	33.3	79	63.2	47	95.9
Doctoral	18	13.0	29	33.2	33	67.3
Comprehensive	48	34.8	70	56.0	40	81.6
Liberal Arts	51	37.0	80	64.0	42	85.7
Two-Year	11	8.0	11	8.5	8	16.3
Public	59	42.8	73	32.8	41	83.7
Black	10	7.2	23	8.4	27	55.1

each type of institution than did regional foundations, and a higher percentage of regional foundations supported each type of institution than did local foundations. The major exception to this occurred in the case of public institutions where the percentage of regional foundation support was less than the percent of local foundations which supported this type of institution. Black institutions showed a dramatic increase in support from 7.2 percent of local foundations giving one or more grants to 55.1 percent of national foundations giving black institutions one or more grants. This trend was also interesting because it was inverse to the number of foundations in each category. That is, 138 foundations were locally oriented, 125 were regionally oriented, and only forty-nine were nationally oriented.

Significant chi-squares were obtained for each type of foundation geographical orientation. (See table 36.) In all cases the null hypothesis was rejected. It was concluded that local foundation grants were not equally distributed among types of institutions, regional foundation grants were not equally distributed among types of institutions, and national foundation grants were not equally distributed among types of institutions.

TABLE 36

CHI-SQUARE ANALYSIS OF NUMBER OF LOCAL, REGIONAL AND NATIONAL FOUNDATIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

	Local Foundations		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	46	39	1.26
Doctoral	18	39	11.31
Comprehensive	48	39	2.08
Liberal Arts	51	39	3.69
Two-Year	11	39	20.10
Public	19	39	10.26
Total	193		48.70

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 48.70$

Reject H_0. Local foundation grants were not equally distributed among types of institutions.

	Regional Foundations		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	79	57	8.49
Doctoral	29	57	13.75
Comprehensive	70	57	2.96
Liberal Arts	80	57	9.28
Two-Year	11	57	37.12
Public	73	57	4.49
Total	342		76.09

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 76.09$

Reject H_0. Regional foundation grants were not equally distributed among types of institutions.

TABLE 36 - Continued

Type of Institution	National Foundations f_o Observed Frequency	 f_T Theoretical Frequency	 $\frac{(f_o-f_T)^2}{f_T}$
Research	47	35	4.11
Doctoral	33	35	.11
Comprehensive	40	35	.71
Liberal Arts	42	35	1.40
Two-Year	8	35	20.83
Public	41	35	1.03
Total	211		28.19

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$
$X^2 = 28.19$

Reject H_0. National foundation grants were not equally distributed among types of institutions

Almost an equal number of local foundations (between forty-six and fifty-one) supported research, comprehensive, and liberal arts institutions. Far fewer awarded one or more grants to doctoral and public institutions (eighteen and nineteen foundations respectively) while only eleven supported two-year institutions. Therefore, the major contribution to the significant chi-square for local foundations came from the smaller number of foundations which supported doctoral, public, and two-year institutions.

Almost half of the amount of the chi-square for regional foundations came from two-year colleges receiving support from only eleven of the regional foundations.

Doctoral institutions also received one or more grants from few foundations (twenty-nine) and so also contributed to the significance of the chi-square analysis.

The major contribution to the significant chi-square for national foundations came from two-year colleges which received grants from eight of the forty-nine national foundations. Between thirty-three and forty-seven of the national foundations supported the remaining five types of institutions.

Number of Foundations in Nine Geographical Regions Which Gave One or More Grants to Types of Institutions

In table 37 the number of foundations in each of the nine geographical regions which gave one or more grants to each type of institution is shown. There were regional differences in the number of foundations which supported each type of institution. Over 70 percent of foundations in region one supported research universities but only 23.8 percent of foundations in region three awarded one or more grants to this type of institution. Doctoral institutions' support ranged from a high of 60 percent of foundations in region eight to no support from foundations in regions six and nine. Comprehensive institutions received no support in region eight while 77.3 percent of foundations in region six gave one or more grants to this type of school. Liberal arts institutions were supported in all nine regions and with some consistency ranging from 40 percent support in region eight to 60 percent support in region seven. Again

TABLE 37

NUMBER OF FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	Geographical Regions							
	Region 1		Region 2		Region 3		Region 4	
	Number of Foundations		Number of Foundations		Number of Foundations		Number of Foundations	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Research	73	71.6	34	47.2	5	23.8	21	56.8
Doctoral	31	30.4	21	29.2	6	28.6	11	29.7
Comprehensive	51	50.0	39	54.2	7	33.3	20	54.1
Liberal Arts	56	54.9	43	59.7	9	42.9	20	54.1
Two-Year	12	11.8	8	11.1	2	9.5	2	5.4
Public	46	45.1	41	56.9	16	76.2	21	56.8
Black	19	18.6	12	16.7	5	23.8	4	10.8

Type of Institution	Geographical Regions							
	Region 5		Region 6		Region 7		Region 8	
	Number of Foundations		Number of Foundations		Number of Foundations		Number of Foundations	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Research	18	56.3	8	36.4	10	66.7	2	40.0
Doctoral	2	6.3	. . .	. . .	6	40.0	3	60.0
Comprehensive	16	50.0	17	77.3	6	40.0	. . .	. . .
Liberal Arts	19	59.4	12	54.5	9	60.0	2	40.0
Two-Year	3	9.4	2	9.1	. . .	. . .	. . .	. . .
Public	17	53.1	14	63.6	9	60.0	5	100.0
Black	11	34.4	2	9.1	3	20.0	1	20.0

TABLE 37 - Continued

Type of Institution	Geographical Regions Region 9 Number of Foundations Total	 Percent
Research	1	20.0
Doctoral	. . .	. . .
Comprehensive	2	40.0
Liberal Arts	3	60.0
Two-Year	1	20.0
Public	4	80.0
Black	3	60.0

two-year colleges received support from the smallest percentage of foundations in each region, receiving support from 9 to 11 percent of foundations in the majority of regions. Foundations in all regions supported public institutions ranging from a high of receiving at least one grant from all foundations in region eight to a low of receiving support from approximately 45 percent of foundations in region one. Black institutions were given grants from foundations in all regions. This support ranged from receiving one or more grants from about 9 percent of foundations in region six to support from over 34 percent of foundations in region five.

Chi-square was computed separately for each region with the exception of foundations in regions eight and nine. As can be seen in table 38, chi-square was not significant for foundations in regions three, four, and five. With the exception of two-year institutions which were not included in the analysis due to the small number of foundations giving them at least one grant, and with the additional exclusion of doctoral institutions in the analysis of grants in region five for the same reason, it was concluded foundation grants were equally distributed among types of institutions.

TABLE 38

CHI-SQUARE ANALYSIS OF NUMBER OF FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS WHICH GAVE ONE OR MORE GRANTS TO TYPES OF INSTITUTIONS

	Region 1		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	73	45	17.42
Doctoral	31	45	4.36
Comprehensive	51	45	.80
Liberal Arts	56	45	2.69
Two-Year	12	45	24.20
Public	46	45	.02
Total	269		49.49

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 49.49$

Reject H_o. Grants from foundations in region 1 were not equally distributed among types of institutions.

	Region 2		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	34	31	.29
Doctoral	21	31	3.23
Comprehensive	39	31	2.06
Liberal Arts	43	31	4.65
Two-Year	8	31	17.06
Public	41	31	3.23
Total	186		30.52

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 30.52$

Reject H_o. Grants from foundations in region 2 were not equally distributed among types of institutions.

TABLE 38 - Continued

	Region 3		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	5	9	1.77
Doctoral	6	9	1.0
Comprehensive	7	9	.44
Liberal Arts	9	9	. . .
Two-Year	2*	. . .	. . .
Public	16	9	5.44
Total	43		8.65

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 8.65$

Fail to reject H_0. Grants from foundations in region 3 were equally distributed among types of institutions (with the exception of two-year colleges).

	Region 4		
Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	21	19	.21
Doctoral	11	19	3.37
Comprehensive	20	19	.05
Liberal Arts	20	19	.05
Two-Year	2*	. . .	. . .
Public	21	19	.21
Total	93		3.89

*X^2 was not computed for two-year colleges because the cell contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 3.89$

Fail to reject H_0. Grants from foundations in region 4 were equally distributed among types of institutions (excluding two-year institutions).

TABLE 38 - Continued

Type of Institution	Region 5 f_o Observed Frequency	 f_T Theoretical Frequency	 $\frac{(f_o-f_T)^2}{f_T}$
Research	18	18	. . .
Doctoral	2*	. . .	. . .
Comprehensive	16	18	.22
Liberal Arts	19	18	.06
Two-Year	3*	. . .	. . .
Public	17	18	.06
Total	70		.34

*X^2 was not computed for doctoral or two-year colleges because these cells contained less than five. There was no logical way to combine these cells.

For $\alpha = .05$ with 3 degrees of freedom need $X^2 = 7.82$

$X^2 = .34$

Fail to reject H_0. Grants from foundations in region 5 were equally distributed among types of institutions (excluding doctoral and two-year institutions).

Type of Institution	Regions 6 - 7 f_o Observed Frequency	 f_T Theoretical Frequency	 $\frac{(f_o-f_T)^2}{f_T}$
Research	18	16	.25
Doctoral	6	16	6.25
Comprehensive	23	16	3.06
Liberal Arts	21	16	1.56
Two-Year	2*	. . .	. . .
Public	14	16	.25
Total	82		11.37

*X^2 was not computed for two-year colleges because the cells contained less than five. There was no logical way to combine this cell with another.

For $\alpha = .05$ with 4 degrees of freedom need $X^2 = 9.49$

$X^2 = 11.37$

Reject H_0. Grants from foundations in regions 6 and 7 (combined) were not equally distributed among types of institutions.

TABLE 38 - Continued

Type of Institution	Regions 8 - 9*		
	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	3	. . .	. . .
Doctoral	3	. . .	. . .
Comprehensive	2	. . .	. . .
Liberal Arts	5	. . .	. . .
Two-Year	1	. . .	. . .
Public	9	. . .	. . .

*X^2 was not computed for foundations in regions 8 and 9 because of the small number in the majority of cells.

The chi-square calculation in region one was significant at the .001 level with the major contribution to chi-square coming from the small number of foundations which gave support to two-year colleges and from the large number of foundations supporting research institutions. These results were particularly important because one-third of the sample foundations were in this region and because foundations in this region controlled over $13 billion of the total $28 billion in assets held by all foundations in the sixth edition of the Foundation Directory.

For region two the chi-square calculation was significant at the .001 level with over half of the total chi-square coming from the small number of foundations (eight) which supported two-year colleges. In comparison to the two-year colleges doctoral institutions received support from more foundations (twenty-one), but research, comprehensive, liberal arts, and public institutions received grants from the greatest number of foundations, ranging from thirty-four supporting research institutions to forty-three supporting liberal arts colleges.

Foundations in regions six and seven were combined for the purpose of calculating chi-square in order to bring the number in each cell to five or more. Even with this combination, chi-square could not be calculated for the small number of foundations supporting two-year institutions in these regions. The major contribution to the significant chi-square came from the fact that only six foundations supported doctoral institutions in regions six and seven while over two to three times that number of foundations supported the other four types of institutions.

In summary, the chi-square calculation showed grants from foundations in regions one and two and from foundations in regions six and seven combined were not equally distributed among types of institutions. With the exception of two-year colleges, grants to types of institutions from foundations in regions three and four were equally distributed. Excluding doctoral and two-year institutions, grants from foundations in region five were equally distributed among types of institutions. Because of the small number of foundations in the majority of cells, a chi-square analysis was not calculated for foundations located in regions eight and nine.

Number and Dollar Amount of Grants Given to Types of Institutions in Relation to Each Independent Variable

Introduction

The total number of grants and the total dollar amount of grants given to each type of institution were compiled. An analysis of variance statistic was then calculated for the dollar amount of grants while a chi-square statistic was computed for the total number of grants. These analyses examined grants made to each type of institution in relation to each independent variable.

In each case two hypotheses were tested. The first hypothesis (H_0) that the means of the total dollar amount of grants given by foundations to each of the types of institutions were equal was tested against the hypothesis (H_1) that the means of the total dollar amount of grants given by foundations to each of the types of institutions were not equal. The statistical tool used in this case was a two-way analysis of variance. The second hypothesis (H_0) that the distribution of the total number of grants given by foundations to types of institutions was evenly distributed was tested against the hypothesis (H_1) that the distribution of the total number of grants given by foundations to types of institutions was not evenly distributed. Chi-square was the statistic applied here. Black institutions were not included in these statistical analyses since these institutions had been identified separately once they had been included in each of the classifications of types of institutions.

Total Number and Dollar Amount of Grants Given by Foundations to Types of Institutions

The total dollar amount of grants given by foundations included in this study to institutions of higher education was $126,920,000. (See table 39.) The bulk of the grant dollars went to private institutions (72.9 percent) as opposed to public colleges and universities (27.1 percent). Of the total grant dollars research universities received a third (33.9 percent), comprehensive colleges and universities and liberal arts colleges together received over a third (16.6 percent and 17.8 percent respectively), while doctoral institutions received only 4.1 percent and two-year colleges received very little (0.4 percent). Black institutions received 8.8 percent of the total grant dollars.

Looking at the total number of grants given to institutions, 33 percent went to public institutions and 67 percent, or two-thirds, went to private institutions. (See table 39.) Of private institutions, liberal arts colleges received the highest number of grants (22 percent), followed closely by research universities (21.2 percent). Comprehensive institutions received 16.8 percent of the total number of grants; doctoral institutions, 5.9 percent; and two-year colleges, 1.2 percent. Black institutions received 6.2 percent of the total number of grants.

Table 40 shows the number of institutions and the enrollment at each type of institution in comparison with the total number and dollar value of grants received. While

TABLE 39

NUMBER AND TOTAL DOLLAR AMOUNT OF FOUNDATION GRANTS TO TYPES OF INSTITUTIONS

Type of Institution	Grants Awarded	
	Total Dollar	Total Number
Private		
Research	$ 43,048,637	608
Percent of Total	33.9	21.2
Doctoral	5,218,768	171
Percent of Total	4.1	5.9
Comprehensive	21,046,052	483
Percent of Total	16.6	16.8
Liberal Arts	22,652,220	632
Percent of Total	17.8	22.0
Two-Year	539,457	35
Percent of Total	0.4	1.2
Total Private	$ 92,505,134	1,929
Percent of Total	72.9	67.0
Total Public	34,414,985	949
Percent of Total	27.1	33.0
Total	$126,920,119	2,878
Black	11,169,324	179
Percent of Total	8.8	6.2

TABLE 40

TYPES OF INSTITUTIONS BY NUMBER AND ENROLLMENT COMPARED TO TOTAL GRANTS RECEIVED

	Number		Enrollment		Grants Received			
					Dollars		Numbers	
Type of Institution	Total	Percent	Total (In Thousands)	Percent	Total	Percent	Total	Percent
Private								
Research	36	1.4	402.9	3.8	$ 43,048,637	33.9	608	21.2
Doctoral	29	1.2	270.5	2.5	5,218,768	4.1	171	5.9
Comprehensive	240	9.6	796.9	7.4	21,046,052	16.6	483	16.8
Liberal Arts	572	22.8	511.7	4.8	22,652,220	17.8	632	22.0
Two-Year	238	9.5	152.8	1.4	539,457	0.4	35	1.2
Total Private	1,115	44.5	2,134.8	19.9	92,505,134	72.9	1,929	67.0
Total Public	1,393	55.5	8,600.0	80.1	34,414,985	27.1	949	33.0
Total	2,508	100.0	10,734.8	100.0	$126,920,119	100.0	2,878	100.0

SOURCE: Carnegie Commission on Higher Education. A Classification of Institutions of Higher Education. Berkeley, Calif.: Carnegie Foundation for the Advancement of Teaching, 1976: p. xii.

the type of institution most favored by foundations in respect to the total dollar value of grants awarded was the private research university, these universities as a group were only 1.4 percent of the total number of institutions of higher education and accounted for only 3.8 percent of the total enrollment at colleges and universities. Almost a quarter of the institutions (22.8 percent) were liberal arts institutions. They received almost a quarter of the number of grants (22 percent) and received a substantial portion of foundation support, 17.8 percent of the total foundation grant dollars. These schools enrolled less than 5 percent of the total number of students, however. In comparison both to their total number of institutions (9.6 percent of the total institutions) and their enrollment (7.4 percent of the total for all institutions), comprehensive universities and colleges received a disproportionate amount of foundation support: 16.6 percent of the total grant dollars and 16.8 percent of the total number of grants. Doctoral universities were only 1.2 percent of the total institutions in number, accounted for 2.5 percent of the total enrollment, and received 4.1 percent of the total foundation grant dollars and 5.9 percent of the total number of grants. This was quite a contrast to the amount of foundation support which was provided to research institutions. Although two-year colleges were almost 9.5 percent of the total number of institutions, they enrolled only 1.4 percent of the total students, and received only 0.4 percent of the total foundation grant dollars and 1.2 percent of the total number of grants. In comparison, over 80 percent of all students were enrolled at public institutions which comprised over half of the total number of institutions of higher education but which received only 27.1 percent of the total grant dollars and 33 percent of the total number of grants.

When an analysis of variance was calculated for the total dollar amount of grants given by total foundations to types of institutions, the F-ratio of 7.1471 was significant beyond the .001 level. (See table 41.) Examination of the subgroup means showed that grants to research institutions were significantly larger than the average grants for doctoral, comprehensive, liberal arts, and public institutions. Grants to doctoral institutions and two-year colleges were significantly smaller than the average grants for comprehensive, liberal arts, and public institutions.

A chi-square statistic which was calculated for the number of grants given by the total sample foundations to types of institutions was significant beyond the .001 level of confidence. (Refer to table 42.) It was concluded that the number of grants given by foundations to types of institutions was not equally distributed among types of institutions. Doctoral and two-year institutions contributed to chi-square in the direction of receiving fewer grants than would have been expected whereas research, liberal arts, and public institutions contributed in the direction of receiving more grants than would have been expected on the basis of a theoretical frequency.

TABLE 41

ANALYSIS OF VARIANCE OF TOTAL DOLLAR AMOUNT OF GRANTS GIVEN BY TOTAL FOUNDATIONS TO TYPES OF INSTITUTIONS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	595,459.563	5	119,091.875	7.150	.001
Type of Institution	595,459.563	5	119,091.875	7.150	.001
Explained	595,472.000	5	119,094.375	7.150	.001
Residual	47,837,520.000	2,872	16,656.516		
Total	48,432,992.000	2,877	16,834.547		

Reject H_0. The means of the total dollar amount of grants given by foundations to types of institutions were not equal.

Type of Institution	Number	Deviation from the Grand Mean Unadjusted	 Adjusted for Independents
Research	608	26.70	26.71
Doctoral	171	- 13.58	- 13.58
Comprehensive	483	- 0.53	- 0.53
Liberal Arts	632	- 8.26	- 8.26
Two-Year	35	- 28.69	- 28.69
Public	949	- 7.84	- 7.84
(Grand Mean = 44.10)			

TABLE 42

CHI-SQUARE ANALYSIS OF NUMBER OF GRANTS GIVEN BY FOUNDATIONS TO TYPES OF INSTITUTIONS

Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	608	480	34.00
Doctoral	171	480	199.00
Comprehensive	483	480	.02
Liberal Arts	632	480	48.00
Two-Year	35	480	413.00
Public	949	480	458.00
Total	2,878		1,152.02

For α = .001 with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 1{,}152.02$

Reject H_0. The total number of grants given by total foundations to types of institutions was not evenly distributed among types of institutions.

Total Number and Dollar Amount of Grants Given by Private and Corporate Foundations to Types of Institutions

As table 43 shows, private foundations donated the vast majority (92.3 percent) of the grant dollars to types of institutions as compared to the corporate foundation contribution of 7.7 percent of the total. However, corporate foundations made a large number of grants, 43.4 percent of the total, while private foundations donated 56.6 percent of the total number of grants.

TABLE 43

NUMBER AND DOLLAR AMOUNT OF GRANTS TO TYPES OF INSTITUTIONS FROM PRIVATE AND CORPORATE FOUNDATIONS

	Grants Awarded			
	Private Found.		Corporate Found.	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	39,557,316	371	3,491,326	237
% of Found. Tot.	33.7	22.8	35.8	19
% of Inst. Tot.	91.9	61.0	8.1	39.0
% of Higher Educ. Tot.	31.1	12.9	2.8	8.2
Doctoral	4,299,719	79	919,050	92
% of Found. Tot.	3.7	4.9	9.5	7.4
% of Inst. Tot.	82.4	46.2	17.6	53.8
% of Higher Educ. Tot.	3.4	2.7	0.7	3.2
Comprehensive	19,714,161	257	1,331,891	226
% of Found. Tot.	16.8	15.8	13.8	18.1
% of Inst. Tot.	93.7	53.2	6.3	46.9
% of Higher Educ. Tot.	15.5	8.9	1.0	7.9
Liberal Arts	21,583,845	429	1,068,375	203
% of Found. Tot.	18.4	26.4	11.1	16.2
% of Inst. Tot.	95.3	67.9	4.7	32.1
% of Higher Educ. Tot.	17.0	14.9	0.8	7.1
Two-Year	517,836	25	21,621	10
% of Found. Tot.	0.4	1.5	0.2	0.8
% of Inst. Tot.	96.0	71.4	4.0	28.6
% of Higher Educ. Tot.	0.4	0.9	.02	0.3
Total Private	85,672,877	1,161	6,832,263	768
% of Found. Tot.	73.1	71.3	70.4	61.4
% of Inst. Tot.	92.6	60.2	7.4	39.8
% of Higher Educ. Tot.	67.5	40.4	5.4	26.7
Total Public	31,536,109	467	2,878,884	482
% of Found. Tot.	26.9	28.7	29.6	38.6
% of Inst. Tot.	91.6	49.2	8.4	50.8
% of Higher Educ. Tot.	24.8	16.2	2.3	16.7
TOTAL	117,208,986	1,628	9,711,147	1,250
Percent	92.3	56.6	7.7	43.4
Black	10,734,517	98	434,808	81
% of Found. Tot.	9.2	6.0	4.5	6.5
% of Inst. Tot.	96.1	54.7	3.9	45.3
% of Higher Educ. Tot.	8.5	3.4	0.3	2.8

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 43 - Continued

	Grants Awarded	
	Total	
Type of Institution	Total $	Total #
Private		
Research	43,048,642	608
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	33.9	21.1
Doctoral	5,218,769	171
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	4.1	5.9
Comprehensive	21,046,052	482
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	16.6	16.8
Liberal Arts	22,652,220	632
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	17.8	22.0
Two-Year	539,457	35
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	0.4	1.2
Total Private	92,505,140	1,929
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	72.9	67.0
Total Public	34,414,993	949
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	27.1	33.0
TOTAL	126,920,133	2,878
Percent	100.0	100.0
Black	11,169,325	179
% of Found. Tot.		
% of Inst. Tot.		
% of Higher Educ. Tot.	8.8	6.2

NOTE: Slight variations from totals in table 39 due to rounding error.

Both types of foundations supported private institutions to a greater extent than they supported public institutions. Private foundations gave 73.1 percent of their grant dollars to private institutions while corporate foundations gave 71.3 percent of their grant money to private institutions. Thus, public institutions received 26.9 percent of the private foundation grant dollars and 28.7 percent of total dollars donated by corporate foundations.

Private and corporate foundations both favored research institutions as a grant recipient. Private foundations gave research institutions 33.7 percent of their total grant dollars while corporate foundations gave research institutions 35.8 percent of their total grant dollars. Private foundations funded liberal arts institutions more heavily than did corporate foundations. Liberal arts institutions received 18.4 percent of the total private foundation grant dollars and 11.4 percent of the total corporate grant dollars. Both types of foundations gave comprehensive institutions substantial support. Of the private foundation grant dollars, comprehensive colleges and universities received 16.8 percent of the total, while corporate foundations gave these institutions 13.8 percent of their total grant dollars. Doctoral institutions received a higher percent of support from corporate foundations than from private foundations; i.e., 9.5 percent of the total corporate grant dollars compared to 3.7 percent of the total private foundation grant dollars. Two-year institutions received little support from either type of foundation. Private foundations gave two-year institutions 0.4 percent of their total grant dollars, and corporate foundations gave this type of institution 0.2 percent of their total grant dollars. Black institutions received greater support from private than from corporate foundations: 9.2 percent of the private foundation grant dollars and 4.5 percent of the total corporate foundation grant dollars.

A slightly different pattern was seen in the distribution of the number of grants from each type of foundation. While both favored private institutions, private foundations gave private institutions of higher education 71.3 percent of their total number of grants and corporate foundations gave private institutions 61.4 percent. Public institutions received 28.7 percent of the total number of grants from private foundations and a higher percentage, 38.6 percent, from corporate foundations. Of the number of grants to private institutions of higher education from private foundations, the distribution was 26.4 percent to liberal arts institutions, 22.8 percent to research universities, 15.8 percent to comprehensive institutions, 4.9 percent to doctoral universities, and 1.5 percent to two-year colleges. The distribution of the number of grants from corporate foundations was 19 percent to research universities, 18.1 percent to comprehensive institutions, 16.2 percent to liberal arts colleges, 7.4 percent to doctoral universities, and 0.8 percent to two-year institutions. Both types of foundations gave approximately the same percent of the total number of grants to black institutions: 6.0 percent from private foundations and 6.5 percent from corporate foundations.

As table 44 shows, when an analysis of variance was calculated for the total dollar amount of grants given by private and corporate foundations, the F-ratios all were significant beyond the .001 level. It was concluded the means of the dollar amount of grants given by private and corporate foundations to types of institutions were not equal, and the null hypothesis was rejected. Examination of the adjusted deviation from the subgroup means for type of foundation showed average grants from private foundations were demonstrably larger than the average grants given by corporate foundations. Two-year and liberal arts colleges had the largest negative deviations from the grand mean; research institutions contributed the largest (and single) positive difference from the grand mean. These differences probably accounted for the significance of the F-tests.

The number of grants given by types of foundations to types of institutions was analyzed by means of a chi-square statistic and was significant above the .001 level. (See table 45.) From this it was concluded that the number of grants given by private and corporate foundations was not equally distributed among types of institutions. Looking at the row percentages, it can be seen that doctoral and two-year institutions contributed to the level of significance by receiving a low percentage of the number of grants from

TABLE 44

ANALYSIS OF VARIANCE OF DOLLAR AMOUNT OF GRANTS GIVEN BY PRIVATE AND CORPORATE FOUNDATIONS TO TYPES OF INSTITUTIONS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	3,484,838.000	6	580,806.313	37.098	.001
Type of Foundation	2,889,378.000	1	2,889,378.000	184.555	.001
Type of Institution	568,015.375	5	113,603.063	7.256	.001
Explained	3,484,848.000	6	580,808.000	37.098	.001
Residual	44,948,144.000	2,871	15,655.918		
Total	48,432,992.000	2,877	16,834.547		

Reject H_0. The means of the dollar amount of grants given by private and corporate foundations to types of institutions were not equal.

Type of Foundation Plus Type of Institution	Number	Deviation from the Grand Mean: Unadjusted	Deviation from the Grand Mean: Adjusted for Independents
Type of Foundation			
Private	1,628	27.90	28.12
Corporate	1,250	- 36.33	- 36.62
Type of Institution			
Research	608	26.70	23.82
Doctoral	171	- 13.58	- 6.87
Comprehensive	483	- 0.53	1.65
Liberal Arts	632	- 8.26	- 15.58
Two-Year	35	- 28.69	- 38.31
Public	949	- 7.84	- 3.07
(Grand Mean = 44.10)			

TABLE 45

CHI-SQUARE ANALYSIS OF NUMBER OF GRANTS GIVEN BY PRIVATE AND CORPORATE FOUNDATIONS TO TYPES OF INSTITUTIONS

Type of Foundation	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Private	Count	371	79	257	429	25	467		
	Row %	22.8	4.9	15.8	26.4	1.5	28.7		
	Column %	61.0	46.2	53.2	67.9	71.4	49.2		
	Total %	12.9	2.7	8.9	14.9	0.9	16.2	1,628	56.6
Corporate	Count	237	92	226	203	10	482		
	Row %	19.0	7.4	18.1	16.2	0.8	38.6		
	Column %	39.0	53.8	46.8	32.1	28.6	50.8		
	Total %	8.2	3.2	7.9	7.1	0.3	16.7	1,250	43.4
Column Total	Count	608	171	483	632	35	949	2,878	
	%	21.1	5.9	16.8	22.0	1.2	33.0		100.0

For $\alpha = .001$ with 5 degrees of freedom need $X^2 = 20.52$

$X^2 = 71.58$

Reject H_0. The total number of grants given by private and corporate foundations to types of institutions was not evenly distributed among types of institutions both private and corporate foundations while public institutions contributed in the direction of receiving a high percentage of the number of grants given by corporate foundations. The column percentages showed doctoral institutions received a higher percentage of grants from corporate than from private foundations. It also showed that for public institutions the number of grants given by each type of foundation was nearly equal and for the remaining types of institutions 53 percent or more of the number of grants received came from private foundations. All of these differences contributed to the magnitude of the chi-square.

Total Number and Dollar Amount of Grants Given By Foundations (Stratified by Total Dollar Amount of Grants Awarded) to Types of Institutions

When foundations were stratified into seven ranges according to the total dollar value of the grants they made during 1975, it was seen that foundations in all stratifications gave a substantially higher percentage of their grants to private, rather than public, institutions of higher education. (See table 46.) This applied to both the total dollar value of grants and to the total number of grants.

Certain types of institutions received a greater percentage of the total dollar amount of grants from each stratification of foundation. For example, research universities received 45.8 percent of the dollars given by the foundations granting over $60 million but these institutions received 21.4 percent of the grant dollars given by

TABLE 46

TOTAL NUMBER AND DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS (STRATIFIED BY TOTAL DOLLAR AMOUNT OF GRANTS AWARDED) TO TYPES OF INSTITUTIONS

	Total $ Amt. of Grants Awarded by Found.			
	Under $100,000		$100,000 - Under $500,000	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	242,732	39	2,582,715	177
% by Grant Size	25.1	23.4	30.4	23.0
% of Inst. Tot.	0.6	6.4	6.0	29.1
% of Higher Educ. Tot.	0.2	1.4	2.0	6.2
Doctoral	42,612	8	362,183	48
% by Grant Size	4.4	4.8	4.3	6.2
% of Inst. Tot.	0.8	4.7	6.9	28.1
% of Higher Educ. Tot.	.03	0.3	2.9	1.7
Comprehensive	111,823	24	1,531,040	125
% by Grant Size	11.6	14.4	18.0	16.2
% of Inst. Tot.	0.5	5.0	7.3	25.9
% of Higher Educ. Tot.	0.09	0.8	1.2	4.3
Liberal Arts	350,310	52	1,359,611	162
% by Grant Size	36.2	31.1	16.0	21.0
% of Inst. Tot.	1.5	8.2	6.0	25.6
% of Higher Educ. Tot.	0.3	1.8	1.1	5.6
Two-Year	9,400	5	85,925	11
% by Grant Size	1.0	3.0	1.0	1.4
% of Inst. Tot.	1.7	14.3	15.9	31.4
% of Higher Educ. Tot.	.007	0.2	.07	0.4
Total Private	756,887	128	5,921,474	523
% by Grant Size	78.3	76.6	69.7	67.9
% of Inst. Tot.	0.8	6.6	6.4	27.1
% of Higher Educ. Tot.	0.6	4.4	4.7	18.2
Total Public	210,219	39	2,568,482	247
% by Grant Size	21.7	23.4	30.3	32.1
% of Inst. Tot.	0.6	4.1	7.5	26.0
% of Higher Educ. Tot.	0.2	1.4	2.0	8.6
TOTAL	967,106	167	8,489,956	770
Percent of Higher Educ.	0.8	5.8	6.7	26.8
Black	21,050	5	319,499	51
% by Grant Size	2.2	3.0	3.8	6.6
% of Inst. Tot.	0.2	2.8	2.9	28.5
% of Higher Educ. Tot.	.02	0.2	0.3	1.8

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 46 - Continued

	Total $ Amt. of Grants Awarded by Found.			
	$500,000 - Under $1 million		$1 million - Under $3 million	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	1,672,324	95	3,763,711	86
% by Grant Size	32.0	21.7	40.4	20.0
% of Inst. Tot.	3.9	15.6	8.7	14.1
% of Higher Educ. Tot.	1.3	3.3	3.0	3.0
Doctoral	212,711	33	255,100	22
% by Grant Size	4.1	7.6	2.7	5.1
% of Inst. Tot.	4.1	19.3	4.9	12.9
% of Higher Educ. Tot.	0.2	1.1	0.2	0.8
Comprehensive	589,038	86	1,931,691	96
% by Grant Size	11.3	19.7	20.7	22.3
% of Inst. Tot.	2.8	17.8	9.2	19.9
% of Higher Educ. Tot.	0.5	3.0	1.5	3.3
Liberal Arts	1,062,046	67	1,376,744	108
% by Grant Size	20.3	15.3	14.8	25.1
% of Inst. Tot.	4.7	10.6	6.1	17.1
% of Higher Educ. Tot.	0.8	2.3	1.1	3.8
Two-Year	27,000	6	18,121	7
% by Grant Size	0.5	1.4	0.2	1.6
% of Inst. Tot.	5.0	17.1	3.4	20.0
% of Higher Educ. Tot.	.02	0.2	.01	0.2
Total Private	3,563,119	287	7,345,367	319
% by Grant Size	68.2	65.7	78.8	74.2
% of Inst. Tot.	3.9	14.9	7.9	16.5
% of Higher Educ. Tot.	2.8	10.0	5.8	11.1
Total Public	1,661,900	150	1,971,587	111
% by Grant Size	31.8	34.3	21.2	25.8
% of Inst. Tot.	4.8	15.8	5.7	11.7
% of Higher Educ. Tot.	1.3	5.2	1.6	3.9
TOTAL	5,225,019	437	9,316,954	430
Percent of Higher Educ.	4.1	15.2	7.3	14.9
Black	28,083	12	92,700	33
% by Grant Size	0.5	2.7	1.0	7.7
% of Inst. Tot.	0.3	6.7	0.8	18.4
% of Higher Educ. Tot.	.02	0.4	.07	1.1

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 46 - Continued

	Total $ Amt. of Grants Awarded by Found.			
	$3 million - Under $20 million		$20 million - Under $60 million	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	13,150,984	128	8,483,055	47
% by Grant Size	40.1	20.6	21.4	14.8
% of Inst. Tot.	30.5	21.1	19.7	7.7
% of Higher Educ. Tot.	10.4	4.4	6.7	1.6
Doctoral	1,873,342	40	2,161,940	16
% by Grant Size	5.4	6.5	5.5	5.0
% of Inst. Tot.	35.9	23.4	41.4	9.4
% of Higher Educ. Tot.	1.5	1.4	1.7	0.6
Comprehensive	4,701,765	85	8,290,864	54
% by Grant Size	11.6	13.7	20.9	17.0
% of Inst. Tot.	22.3	17.6	39.4	11.2
% of Higher Educ. Tot.	3.7	3.0	6.5	1.9
Liberal Arts	5,743,119	120	10,255,774	99
% by Grant Size	16.6	19.4	25.8	31.2
% of Inst. Tot.	25.4	19.0	45.3	15.7
% of Higher Educ. Tot.	4.5	4.2	8.1	3.4
Two-Year	209,011	3	190,000	3
% by Grant Size	0.6	0.5	0.5	0.9
% of Inst. Tot.	38.7	8.6	35.2	8.6
% of Higher Educ. Tot.	0.2	0.1	0.1	0.1
Total Private	25,678,221	376	29,381,633	219
% by Grant Size	74.3	60.7	74.1	69.1
% of Inst. Tot.	27.8	19.5	31.8	11.4
% of Higher Educ. Tot.	20.2	13.1	23.1	7.6
Total Public	8,889,539	244	10,283,070	98
% by Grant Size	25.7	39.4	25.9	30.9
% of Inst. Tot.	25.8	25.7	29.9	10.3
% of Higher Educ.	7.0	8.5	8.1	3.4
TOTAL	34,567,760	620	39,664,703	317
Percent of Higher Educ.	27.2	21.5	31.3	11.0
Black	1,318,110	45	2,875,709	19
% by Grant Size	3.8	7.3	7.3	6.0
% of Inst. Tot.	11.8	25.1	25.7	10.6
% of Higher Educ. Tot.	1.0	1.6	2.3	0.7

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 46 - Continued

Type of Institution	Total $ Amt. of Grants Awarded by Found.			
	Over $60 million		Total Foundations	
	Total $	Total #	Total $	Total #
Private				
Research	13,153,154	36	43,048,675	608
% by Grant Size	45.8	26.3		
% of Inst. Tot.	30.6	5.9		
% of Higher Educ. Tot.	10.4	1.3	33.9	21.1
Doctoral	310,881	4	5,218,769	171
% by Grant Size	1.1	2.9		
% of Inst. Tot.	6.0	2.3		
% of Higher Educ. Tot.	0.2	0.1	4.1	5.9
Comprehensive	3,889,836	13	21,046,057	483
% by Grant Size	13.6	9.5		
% of Inst. Tot.	18.5	2.7		
% of Higher Educ. Tot.	3.1	0.5	16.6	16.8
Liberal Arts	2,504,625	24	22,652,229	632
% by Grant Size	8.7	17.5		
% of Inst. Tot.	11.1	3.8		
% of Higher Educ. Tot.	2.0	0.8	17.8	22.0
Two-Year	. . .	. . .	539,457	35
% by Grant Size	. . .	. . .		
% of Inst. Tot.	. . .	. . .		
% of Higher Educ. Tot.	. . .	. . .	0.4	1.2
Total Private	19,858,486	77	92,505,187	1,929
% by Grant Size	69.2	56.2		
% of Inst. Tot.	21.5	4.0		
% of Higher Educ. Tot.	15.6	2.7	72.9	67.0
Total Public	8,830,223	60	34,415,020	949
% by Grant Size	30.8	43.8		
% of Inst. Tot.	25.7	6.3		
% of Higher Educ. Tot.	7.0	2.1	27.1	33.0
TOTAL	28,688,709	137	126,920,207	2,878
Percent of Higher Educ.	22.6	4.8		
Black	6,514,177	14	11,169,328	179
% by Grant Size	22.7	10.2		
% of Inst. Tot.	58.3	7.8		
% of Higher Educ. Tot.	5.1	0.5	8.8	6.2

NOTE: Slight variations from totals in table 39 due to rounding error.

foundations granting $20 million to under $60 million. In comparison, liberal arts colleges received 25.8 percent of the total grant dollars given by foundations awarding $20 million to under $60 million and received only 8.7 percent of the grants awarded by foundations giving over $60 million in grants.

The percentages of the total grant dollars and the total number of grants awarded to types of institutions varied for each type of institution in relation to the foundation stratifications of total grants awarded. For example, two-year colleges received almost 16 percent of their grant dollars from foundations which granted $100,000 to $499,999 and received only 3.4 percent of their grant dollars from those foundations which awarded $1 million to under $3 million. In contrast, research institutions received 6 percent of their grant dollars from foundations which gave $100,000 to $499,999 and 8.7 percent of their grant dollars from foundations which awarded $1 million to under $3 million.

Generally, when foundations in the stratifications of under $3 million total grants awarded were analyzed the percentage of the total number of grants received by each type of institution from these foundations was larger than the percentage of the total grant dollars received from the same foundations. Foundations which awarded more than $3 million in total grants for the most part gave fewer but larger grants to each type of institution. For example, doctoral institutions received 82.3 percent of their grant dollars from foundations which awarded $3 million and over but these foundations gave 35.1 percent of the total number of grants received by doctoral institutions.

The few foundations which gave $20 million and over in total grants accounted for a substantial percentage of the grant dollars given to each type of institution. This ranged from 35.2 percent of the total grant dollars for two-year colleges to 57.9 percent of the grant dollars for comprehensive institutions. Black institutions received the bulk of their grant money (84 percent) from the five foundations in this study which awarded $20 million and above in total grants.

The analysis of variance, shown in table 47, which was calculated for the dollar amount of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions produced F-ratios which were significant beyond the .001 level of confidence. The null hypothesis was rejected, and it was concluded the means of the total dollar amount of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions were not equal. Adjusted deviations from the grand mean showed foundations which awarded under a total of $3 million contributed in a negative direction to the mean while foundations awarding over $3 million all made grants which averaged above the mean. The largest deviations from the mean were shown by foundations which awarded $20 million and above in total grant dollars. Once

TABLE 47

ANALYSIS OF VARIANCE OF DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS (STRATIFIED BY TOTAL DOLLAR AMOUNT OF GRANTS AWARDED) TO TYPES OF INSTITUTIONS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	8,386,279.000	11	762,389.000	54.561	.001
Total Dollar Amount of Grants Awarded	7,790,820.000	6	1,298,470.000	92.927	.001
Type of Institution	722,069.500	5	144,413.875	10.335	.001
Explained	8,386,288.000	11	762,389.813	54.562	
Residual	40,046,704.000	2,866	13,973.027		
Total	48,432,992.000	2,877	16,834.547		

Reject H_0. The means of the total dollar amount of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions were not equal.

TABLE 47 - Continued

Total Dollar Amount of Grants Awarded Plus Type of Institution	Number	Deviation from the Grand Mean Unadjusted	Deviation from the Grand Mean Adjusted for Independents
Total Dollar Amount of Grants Awarded			
Under $100,000	167	- 38.30	- 38.88
$100,000 - Under $500,000	770	- 33.07	- 33.74
$500,000 - Under $1 million	437	- 32.14	- 32.86
$1 million - Under $3 million	430	- 22.43	- 22.89
$3 million - Under $20 million	620	11.65	12.37
$20 million - Under $60 million	317	81.02	83.47
Over $60 million	137	165.31	164.61
Type of Institution			
Research	608	26.70	28.59
Doctoral	171	- 13.58	- 7.56
Comprehensive	483	- 0.53	4.60
Liberal Arts	632	- 8.26	- 10.69
Two-Year	35	- 28.69	- 10.53
Public	949	- 7.84	- 11.79

(Grand Mean = 44.10)

again, research institutions averaged grants considerably above the mean. Public, two-year, and liberal arts colleges and universities all showed negative deviations from the grand mean. The significance of the F-tests was probably accounted for by these differences.

The number of grants awarded to types of institutions was analyzed in relation to the total dollar amount of grants awarded by foundations via a chi-square statistic. (See table 48.) Significance beyond the .001 level was the result. Because of this the null hypothesis was rejected, and it was determined the number of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions was not equally distributed among types of institutions. Foundations in all grant stratifications awarded a lower percentage of grants to doctoral universities and two-year colleges than were awarded to the remaining types of institutions. In two grant stratifications comprehensive colleges and universities received the greatest proportion of the number of grants awarded. In general, as the grant size of foundations increased the percentage of the number of total grants received by two-year colleges decreased. Foundations at either extreme of grant size gave a smaller total number of grants than did foundations in the middle ranges. Over 40 percent of the number of grants received by all types of institutions came from foundations in two grant stratifications: $100,000

TABLE 48

CHI-SQUARE ANALYSIS OF NUMBER OF GRANTS GIVEN BY FOUNDATIONS (STRATIFIED BY TOTAL DOLLAR AMOUNT OF GRANTS AWARDED) TO TYPES OF INSTITUTIONS

Total $ Amt. of Grants Awarded	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Under $100,000	Count	39	8	24	52	5	39		
	Row %	23.4	4.8	14.4	31.1	3.0	23.4		
	Column %	6.4	4.7	5.0	8.2	14.3	4.1		
	Total %	1.4	0.3	0.8	1.8	0.2	1.4	167	5.8
$100,000 - Under $500,000	Count	177	48	125	162	11	247		
	Row %	23.0	6.2	16.2	21.0	1.4	32.1		
	Column %	29.1	28.1	25.9	25.6	31.4	26.0		
	Total %	6.2	1.7	4.3	5.6	0.4	8.6	770	26.8
$500,000 - Under $1 million	Count	95	33	86	67	6	150		
	Row %	21.7	7.6	19.7	15.3	1.4	34.3		
	Column %	15.6	19.3	17.8	10.6	17.1	15.8		
	Total %	3.3	1.1	3.0	2.3	0.2	5.2	437	15.2
$1 million - Under $3 million	Count	86	22	96	108	7	111		
	Row %	20.0	5.1	22.3	25.1	1.6	25.8		
	Column %	14.1	12.9	19.9	17.1	20.0	11.7		
	Total %	3.0	0.8	3.3	3.8	0.2	3.9	430	14.9

TABLE 48 - Continued

Total $ Amt. of Grants Awarded	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
$3 million - Under $20 million	Count	128	40	85	120	3	244		
	Row %	20.6	6.5	13.7	19.4	0.5	39.4		
	Column %	21.1	23.4	17.6	19.0	8.6	25.7		
	Total %	4.4	1.4	3.0	4.2	0.1	8.5	620	21.5
$20 million- Under $60 million	Count	47	16	54	99	3	98		
	Row %	14.8	5.0	17.0	31.2	0.9	30.9		
	Column %	7.7	9.4	11.2	15.7	8.6	10.3		
	Total %	1.6	0.6	1.9	3.4	0.1	3.4	317	11.0
Over $60 million	Count	36	4	13	24	. . .	60		
	Row %	26.3	2.9	9.5	17.5	. . .	43.8		
	Column %	5.9	2.3	2.7	3.8	. . .	6.3		
	Total %	1.3	0.1	0.5	0.8	. . .	2.1	137	4.8
Column Total	Count	608	171	483	632	35	949	2,878	
	%	21.1	5.9	16.8	22.0	1.2	33.0		100.0

For $\alpha = .001$ with 30 degrees of freedom need $X^2 = 59.70$

$X^2 = 101.62$

Reject H_0. The total number of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions was not equally distributed among types of institutions.

to under $500,000 and $3 million to under $20 million. These differences probably accounted for the significance of the chi-square analysis.

Total Number and Dollar Amount of Grants Given By Foundations (Stratified by Asset Size) to Types of Institutions

Foundations in each of the seven asset size stratifications awarded a higher percentage of their grant dollars to private rather than public institutions. (See table 49.) This ranged from foundations in the asset size of $1 million to under $5 million giving 65.8 percent to private institutions to those in the asset range of $10 million to under $25 million giving private institutions 88.3 percent.

As the asset size of foundations increased so did their impact on the total grant dollars given to each type of institution. The thirteen foundations in this study with assets of $100 million or more awarded a minimum of 68 percent of the total grant dollars received by each type of institution. Over 58 percent of the grant dollars for black institutions came from the one foundation (Ford Foundation) with assets of over $2 billion.

In general, foundations with assets of less than $25 million gave more but smaller grants to each type of institution while foundations with assets of over $100 million gave larger but fewer grants. For example, foundations with assets of $1 million to under $5 million gave doctoral institutions 6.7 percent of their total grant dollars and 25.7 percent of their total number of grants (a ratio of

TABLE 49

TOTAL NUMBER AND DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS (STRATIFIED BY ASSET SIZE) TO TYPES OF INSTITUTIONS

	Foundation Asset Size			
	Under $1 million		$1 million - Under $5 million	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	1,043,550	70	2,096,180	158
% by Asset Size	35.9	23.4	23.0	20.8
% of Inst. Tot.	2.4	11.5	4.9	26.0
% of Higher Educ. Tot.	0.8	2.4	2.2	5.5
Doctoral	112,525	21	352,255	44
% by Asset Size	3.9	7.0	3.9	5.8
% of Inst. Tot.	2.2	12.3	6.7	25.7
% of Higher Educ. Tot.	.09	0.7	0.3	1.5
Comprehensive	429,318	57	1,730,518	130
% by Asset Size	14.8	19.1	19.0	17.2
% of Inst. Tot.	2.0	11.8	8.2	26.9
% of Higher Educ. Tot.	0.3	2.0	0.8	4.5
Liberal Arts	365,805	42	1,746,671	163
% by Asset Size	12.6	14.0	19.1	21.5
% of Inst. Tot.	1.6	6.6	7.7	25.8
% of Higher Educ. Tot.	0.3	1.5	1.4	5.7
Two-Year	30,000	5	79,900	14
% by Asset Size	1.0	1.7	0.9	1.8
% of Inst. Tot.	5.6	14.3	14.8	40.0
% of Higher Educ. Tot.	.02	0.2	.06	0.5
Total Private	1,981,198	195	6,005,524	509
% by Asset Size	68.2	65.2	65.8	67.2
% of Inst. Tot.	2.1	10.1	6.5	26.4
% of Higher Educ. Tot.	1.6	6.8	4.7	17.7
Total Public	921,955	104	3,123,846	249
% by Asset Size	31.8	34.8	34.2	32.8
% of Inst. Tot.	2.7	11.0	9.1	26.2
$ of Higher Educ. Tot.	0.7	3.6	2.5	8.7
TOTAL	2,903,153	299	9,129,370	758
% of Higher Educ.	2.3	10.4	7.2	26.3
Black	129,828	14	119,783	28
% by Asset Size	4.4	4.7	1.3	3.7
% of Inst. Tot.	1.2	7.8	1.1	15.6
% of Higher Educ. Tot.	0.1	0.5	.09	1.0

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 49 - Continued

	Foundation Asset Size			
	$25 million - Under $100 million		$100 million - Under $2 billion	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	6,390,151	69	16,408,642	121
% by Asset Size	59.3	29.1	25.1	15.6
% of Inst. Tot.	14.8	11.3	38.1	19.9
% of Higher Educ. Tot.	5.0	2.4	12.9	4.2
Doctoral	318,600	18	3,693,782	43
% by Asset Size	3.0	7.6	5.6	5.6
% of Inst. Tot.	6.1	10.5	70.8	25.1
% of Higher Educ. Tot.	0.3	0.6	2.9	1.5
Comprehensive	1,077,660	41	11,960,628	121
% by Asset Size	10.0	17.3	18.2	15.6
% of Inst. Tot.	5.1	8.5	56.8	25.1
% of Higher Educ. Tot.	0.8	1.4	9.4	4.2
Liberal Arts	1,103,011	54	15,455,387	199
% by Asset Size	10.2	22.8	23.6	25.7
% of Inst. Tot.	4.9	8.5	68.2	31.5
% of Higher Educ. Tot.	0.9	1.9	12.2	6.9
Two-Year	4,500	3	399,011	6
% by Asset Size	.04	1.3	0.6	0.8
% of Inst. Tot.	0.8	8.6	74.0	17.1
% of Higher Educ. Tot.	.004	0.1	0.3	0.2
Total Private	8,893,922	185	47,917,450	490
% by Asset Size	82.5	78.1	73.1	63.4
% of Inst. Tot.	9.6	9.6	51.8	25.4
% of Higher Educ. Tot.	7.0	6.4	37.7	17.0
Total Public	1,885,464	52	17,620,474	284
% by Asset Size	17.5	21.9	26.9	36.7
% of Inst. Tot.	5.5	5.5	51.2	29.9
% of Higher Educ. Tot.	1.5	1.8	13.9	9.9
TOTAL	10,779,386	237	65,537,924	774
% of Higher Educ.	8.5	8.2	51.6	26.9
Black	171,000	10	3,885,419	49
% by Asset Size	1.6	4.2	5.9	6.3
% of Inst. Tot.	1.5	5.6	34.8	27.4
% of Higher Educ. Tot.	0.1	0.3	3.1	1.7

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 49 - Continued

	Foundation Asset Size			
	Over $2 billion		Total Foundations	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	13,153,154	36	43,048,677	608
% by Asset Size	45.8	26.3		
% of Inst. Tot.	30.6	5.9		
% of Higher Educ. Tot.	10.4	1.3	33.9	21.1
Doctoral	310,881	4	5,218,769	171
% by Asset Size	1.1	2.9		
% of Inst. Tot.	6.0	2.3		
% of Higher Educ. Tot.	0.2	0.1	4.1	5.9
Comprehensive	3,889,836	13	21,046,056	483
% by Asset Size	13.6	9.5		
% of Inst. Tot.	18.5	2.7		
% of Higher Educ. Tot.	3.1	0.5	16.6	16.8
Liberal Arts	2,504,625	24	22,652,227	632
% by Asset Size	8.7	17.5		
% of Inst. Tot.	11.1	3.8		
% of Higher Educ. Tot.	2.0	0.8	17.8	22.0
Two-Year	. . .	. . .	539,457	35
% by Asset Size	. . .	. . .		
% of Inst. Tot.	. . .	. . .		
% of Higher Educ. Tot.	. . .	. . .	0.4	1.2
Total Private	19,858,482	77	92,505,172	1,929
% by Asset Size	69.2	56.2		
% of Inst. Tot.	21.5	4.0		
% of Higher Educ. Tot.	15.6	2.7	72.9	67.0
Total Public	8,830,223	60	34,415,015	949
% by Asset Size	30.8	43.8		
% of Inst. Tot.	25.7	6.3		
% of Higher Educ. Tot.	7.0	2.1	27.1	33.0
TOTAL	28,688,705	137	126,920,187	2,878
% of Higher Educ.	22.6	4.8		
Black	6,514,177	14	11,169,328	179
% by Asset Size	22.7	10.2		
% of Inst. Tot.	58.3	7.8		
% of Higher Educ. Tot.	5.1	0.5	8.8	6.2

NOTE: Slight variations from totals in table 39 due to rounding error.

almost 1:4) while foundations in the asset size of $100 million to $2 billion gave doctoral institutions 70.8 percent of the total grant dollars received by doctoral institutions and 25.1 percent of the total number of grants received by doctoral universities (a ratio of almost 3:1).

The proportion of support given each type of institution in relation to the total grants awarded by foundations varied in each foundation asset size stratification. The greatest variation in support for any type of institution in relation to stratifications of foundation asset size was in the support given to research institutions. Research universities received almost 60 percent of the total grant dollars given by foundations with assets of $25 million to under $100 million, in contrast to receiving 23 percent of the total grant dollars given by foundations with assets of $1 million to under $5 million. Doctoral institutions received approximately 6 percent or less of the total support from foundations in all seven asset ranges while two-year colleges received 1 percent or less of the total grant dollars given by foundations in all asset stratifications. Comprehensive institutions ranged from a low of receiving 10 percent of the total grant dollars given by foundations in the asset sizes of $25 million to under $100 million to a high of receiving slightly more than 20 percent of the total grant dollars of foundations with assets of $10 million to under $25 million. Liberal arts institutions received approximately 9 percent of the total grant dollars of foundations with assets of over $2 billion. They received almost 24 percent of the total grant dollars of foundations with assets of $100 million to under $2 billion. The total grant dollars given to public institutions was lowest (11.7 percent) from foundations with assets of $10 million to under $25 million in assets and highest (34.2 percent) for foundations of $1 million to under $5 million in total assets.

In order to test whether the averages of the dollar amount of grants given by foundations (stratified by asset size) to types of institutions were equal, an analysis of variance statistic was employed. From results shown in table 50, it can be seen that all F-ratios were significant beyond the .001 level. Because of these results it was concluded the means of the total dollar amount of grants given by foundations (stratified by asset size) to types of institutions were not equal. Foundations with assets of under $100 million showed negative deviations from the grand mean and therefore awarded smaller average grants than did foundations possessing assets of $100 million and above which showed large positive deviations from the grand mean. Research universities showed a large positive deviation from the grand mean and so received average grants of a size larger than that received by any other type of institution. Public, two-year, liberal arts, and doctoral institutions all showed negative deviations. The significance of the F-tests was probably accounted for by these differences.

TABLE 50

ANALYSIS OF VARIANCE OF DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS (STRATIFIED BY ASSET SIZE) TO TYPES OF INSTITUTIONS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	7,462,075.000	11	678,370.438	47.453	.001
Asset Size	6,866,616.000	6	1,144,436.000	80.056	.001
Type of Institution	728,860.500	5	145,772.063	10.197	.001
Explained	7,462,080.000	11	678,370.875	47.453	.001
Residual	40,970,912.000	2,866	14,295.500		
Total	48,432,992.000	2,877	16,834.547		

Reject H_0. The means of the total dollar amount of grants given by foundations (stratified by asset size) to types of institutions were not equal.

TABLE 50 - Continued

Asset Size Plus Type of Institution	Number	Deviation from the Grand Mean	
		Unadjusted	Adjusted for Independents
Asset Size			
Under $1 million	299	- 34.39	- 35.58
$1 million - Under $5 million	758	- 32.06	- 31.99
$5 million - Under $10 million	390	- 29.20	- 30.36
$10 million - Under $25 million	283	- 29.71	- 30.35
$25 million - Under $100 million	237	1.38	- 2.07
$100 million - Under $2 billion	774	40.57	42.96
Over $2 billion	137	165.31	164.67
Type of Institution			
Research	608	26.70	28.74
Doctoral	171	- 13.58	- 8.14
Comprehensive	483	- 0.53	4.87
Liberal Arts	632	- 8.26	- 10.04
Two-Year	35	- 28.69	- 11.92
Public	949	- 7.84	- 12.30

(Grand Mean = 44.10)

Chi-square was significant above the .001 level for the analysis of the total number of grants given by foundations (stratified by asset size) to types of institutions. (See table 51.) The null hypothesis was rejected, and it was concluded the number of grants given by foundations (stratified by asset size) to types of institutions was not evenly distributed among types of institutions. While doctoral institutions received a higher percentage of the total number of grants than did two-year colleges, foundations in all asset size categories gave a lower percentage of grants to doctoral and two-year colleges than was given to the remaining four types of institutions. In all asset stratifications the majority of the number of grants went to private rather than public institutions. Foundations in two asset size categories ($1 million to under $5 million; $100 million to under $2 billion) provided 46 percent or more of the total number of grants given to all types of institutions. The significance of chi-square was probably accounted for by these differences.

Total Number and Dollar Amount of Grants Given by Foundations to Types of Institutions for Categories of Aid

Certain categories of aid were heavily supported by foundations while other categories received very little support. Almost half of the total foundation grant dollars went for special purpose grants, over 20 percent went for capital fund grants, 23 percent were given for operating

TABLE 51

CHI-SQUARE ANALYSIS OF NUMBER OF GRANTS GIVEN BY FOUNDATIONS (STRATIFIED BY ASSET SIZE) TO TYPES OF INSTITUTIONS

Foundation Asset Size	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Under $1 million	Count	70	21	57	42	5	104		
	Row %	23.4	7.0	19.1	14.0	1.7	34.8		
	Column %	11.5	12.3	11.8	6.6	14.3	11.0		
	Total %	2.4	0.7	2.0	1.5	0.2	3.6	299	10.4
$1 million-Under $5 million	Count	158	44	130	163	14	249		
	Row %	20.8	5.8	17.2	21.5	1.8	32.8		
	Column %	26.0	25.7	26.9	25.8	40.0	26.2		
	Total %	5.5	1.5	4.5	5.7	0.5	8.7	758	26.3
$5 million-Under $10 million	Count	95	26	63	70	2	134		
	Row %	24.4	6.7	16.2	17.9	0.5	34.4		
	Column %	15.6	15.2	13.0	11.1	5.7	14.1		
	Total %	3.3	0.9	2.2	2.4	0.1	4.7	390	13.6
$10 million-Under $25 million	Count	59	15	58	80	5	66		
	Row %	20.8	5.3	20.5	28.3	1.8	23.3		
	Column %	9.7	8.8	12.0	12.7	14.3	7.0		
	Total %	2.1	0.5	2.0	2.8	0.2	2.3	283	9.8

TABLE 51 - Continued

		Type of Institution						Row Total	
Foundation Asset Size	No. of Grants	Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
$25 million-Under $100 million	Count	69	18	41	54	3	52		
	Row %	29.1	7.6	17.3	22.8	1.3	21.9		
	Column %	11.3	10.5	8.5	8.5	8.6	5.5		
	Total %	2.4	0.6	1.4	1.9	0.1	1.8	237	8.2
$100 million-Under $2 billion	Count	121	43	121	199	6	284		
	Row %	15.6	5.6	15.6	25.7	0.8	36.7		
	Column %	19.9	25.1	25.1	31.5	17.1	29.9		
	Total %	4.2	1.5	4.2	6.9	0.2	9.9	774	26.9
Over $2 billion	Count	36	4	13	24	. . .	60		
	Row %	26.3	2.9	9.5	17.5	. . .	43.8		
	Column %	5.9	2.3	2.7	3.8	. . .	6.3		
	Total %	1.3	0.1	0.5	0.8	. . .	2.1	137	4.8
Column Total	Count	608	171	483	632	35	949	2,878	
	%	21.1	5.9	16.8	22.0	1.2	33.0		100.0

For $\propto = .001$ with 30 degrees of freedom need $X^2 = 59.70$

$X^2 = 92.0$

Reject H_0. The total number of grants given by foundations (stratified by asset size) to types of institutions was not evenly distributed among types of institutions.

expenses, less than 5 percent were allocated for scholarships, and only 1 percent were given for endowments. (See table 52.) No type of institution received substantial dollar support for endowment or scholarship purposes. The bulk of the dollar support for each type of institution was for special purpose grants, capital fund grants, and operating expenses. However, there were differences in the total grant dollar support for each type of institution. For example, 84 percent of the grant dollars for research institutions was for two purposes: special purpose grants (61 percent) and operating expense grants (23 percent). In contrast, for comprehensive colleges and universities, capital funds and operating expenses were the purposes for which the majority of their grant dollars were provided (37.6 percent and 34.4 percent respectively).

The number of grants was distributed differently than were the grant dollars. Over half of the grants received by each type of private institution were for operating expenses while 42.3 percent of the grants received by public institutions were for this purpose. This was in contrast to the distribution of the grant dollars where operating expense grants ranged from a low of 13 percent of the public institution grant dollar to a high of almost 43 percent for two-year institutions. Capital grants ranged from less than 4 percent of the total number of grants received by public colleges and universities as well as by research institutions to a high of 13 percent of the

TABLE 52

TOTAL NUMBER AND DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS TO TYPES OF INSTITUTIONS FOR CATEGORIES OF AID

	Category of Aid			
	Scholarships		Capital Funds	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	2,030,211	100	4,342,500	26
% of Cate. Tot.	33.8	20.5	5.8	11.2
% of Inst. Tot.	4.7	14.7	10.1	3.8
% of Higher Educ. Tot.	1.6	3.2	3.4	0.8
Doctoral	239,975	27	1,657,500	11
% of Cate. Tot.	4.0	5.5	6.0	4.7
% of Inst. Tot.	4.6	14.8	31.8	6.0
% of Higher Educ. Tot.	0.2	0.9	1.3	0.4
Comprehensive	877,895	59	7,910,050	66
% of Cate. Tot.	14.6	12.1	28.8	28.4
% of Inst. Tot.	4.2	11.5	37.6	12.9
% of Higher Educ. Tot.	0.7	1.9	6.2	2.1
Liberal Arts	712,000	62	8,439,329	89
% of Cate. Tot.	11.8	12.7	30.7	38.4
% of Inst. Tot.	3.1	9.4	37.3	13.5
% of Higher Educ. Tot.	0.6	2.0	6.6	2.9
Two-Year	8,500	4	8,000	2
% of Cate. Tot.	0.1	0.8	0.03	0.9
% of Inst. Tot.	1.6	11.4	1.5	5.7
% of Higher Educ. Tot.	.007	0.1	.006	.06
Total Private	3,868,581	252	22,357,379	194
% of Cate. Tot.	64.3	51.7	81.4	83.6
% of Inst. Tot.	4.2	12.2	24.2	9.4
% of Higher Educ. Tot.	3.0	8.1	17.6	6.3
Total Public	2,143,980	235	5,108,316	38
% of Cate. Tot.	35.7	48.3	18.6	16.4
% of Inst. Tot.	6.2	22.6	14.8	3.7
% of Higher Educ. Tot.	1.7	7.6	4.0	1.2
TOTAL	6,012,561	487	27,465,695	232
% of Higher Educ.	4.7	15.7	21.6	7.5
Black	149,000	21	1,757,785	13
% of Cate. Tot.	2.5	4.3	6.4	5.6
% of Inst. Tot.	1.3	11.1	15.7	6.8
% of Higher Educ. Tot.	0.1	0.7	1.4	4.2

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 52 - Continued

	Category of Aid			
	Endowments		Operating Expense	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	224,217	3	9,945,148	348
% of Cate. Tot.	16.9	25.0	34.1	22.4
% of Inst. Tot.	0.5	0.4	23.1	51.2
% of Higher Educ. Tot.	0.2	.1	7.8	11.2
Doctoral	500,000	1	884,682	99
% of Cate. Tot.	37.8	8.3	3.0	6.4
% of Inst. Tot.	9.6	0.5	17.0	54.4
% of Higher Educ. Tot.	0.4	.03	0.7	3.2
Comprehensive	15,000	1	7,233,888	287
% of Cate. Tot.	1.1	8.3	24.8	18.4
% of Inst. Tot.	.07	0.2	34.4	56.1
% of Higher Educ. Tot.	.01	.03	5.7	9.2
Liberal Arts	55,250	3	6,388,706	360
% of Cate. Tot.	4.2	25.0	21.9	23.1
% of Inst. Tot.	0.2	0.5	28.2	54.7
% of Higher Educ. Tot.	.04	.1	5.0	11.6
Two-Year	. . .	. . .	230,946	26
% of Cate. Tot.	. . .	. . .	0.8	1.6
% of Inst. Tot.	. . .	. . .	42.8	74.3
% of Higher Educ. Tot.	. . .	. . .	0.2	0.8
Total Private	794,467		24,683,379	1,117
% of Cate. Tot.	60.0	66.7	84.7	71.7
% of Inst. Tot.	0.9	0.4	26.7	54.1
% of Higher Educ. Tot.	0.6	0.3	19.4	36.0
Total Public	529,250	4	4,472,067	440
% of Cate. Tot.	40.00	33.3	15.3	28.3
% of Inst. Tot.	1.5	0.4	13.0	42.3
% of Higher Educ. Tot.	0.4	0.1	3.5	14.2
TOTAL	1,323,717	12	29,155,446	1,557
% of Higher Educ.	1.0	0.4	23.0	50.2
Black	5,250	1	4,382,208	98
% of Cate. Tot.	0.4	8.3	15.0	6.3
% of Inst. Tot.	.05	0.5	39.2	51.6
% of Higher Educ. Tot.	.004	.03	3.5	3.2

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 52 - Continued

	Category of Aid			
	Special Purpose		Total	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	26,506,562	203	43,048,638	680
% of Cate. Tot.	42.1	24.9		
% of Inst. Tot.	61.6	29.9		
% of Higher Educ. Tot.	20.9	6.5	33.9	21.9
Doctoral	1,936,612	44	5,218,769	182
% of Cate. Tot.	3.1	5.4		
% of Inst. Tot.	37.1	24.2		
% of Higher Educ. Tot.	1.5	1.4	4.1	5.9
Comprehensive	5,009,220	99	21,046,053	512
% of Cate. Tot.	8.0	12.1		
% of Inst. Tot.	23.8	19.3		
% of Higher Educ. Tot.	3.9	3.2	16.6	16.5
Liberal Arts	7,056,945	144	22,652,230	658
% of Cate. Tot.	11.2	17.6		
% of Inst. Tot.	31.2	21.9		
% of Higher Educ. Tot.	5.6	4.6	17.8	21.2
Two-Year	292,011	3	539,457	35
% of Cate. Tot.	.05	0.4		
% of Inst. Tot.	54.1	8.6		
% of Higher Educ. Tot.	0.2	.1	0.4	1.1
Total Private	40,801,350	493	92,505,156	2,064
% of Cate. Tot.	64.8	60.4		
% of Inst. Tot.	44.1	23.9		
% of Higher Educ. Tot.	32.1	15.9	72.9	66.5
Total Public	22,161,400	323	34,415,013	1,040
% of Cate. Tot.	35.2	39.6		
% of Inst. Tot.	64.4	31.1		
% of Higher Educ. Tot.	17.5	10.4	27.1	33.5
TOTAL	62,962,750	816	126,920,169	3,104
% of Higher Educ.	49.6	26.3		
Black	4,875,089	57	11,169,332	190
% of Cate. Tot.	7.7	7.0		
% of Inst. Tot.	43.6	30.0		
% of Higher Educ. Tot.	3.8	1.8	8.8	6.1

NOTE: Slight variations from totals in table 39 due to rounding error.

number of grants received by comprehensive and liberal arts institutions. However, in terms of grant dollars, capital grants ranged from a low of 1.5 percent of the total for two-year colleges to over 37 percent of the grant dollar received by comprehensive and liberal arts institutions. For black institutions both the majority of their total number of grants and their total grant dollars were for operating expenses (39.2 percent of the total grant dollars and 51.6 percent of the total number of grants) and special purposes (43.6 percent of the total grant dollars and 30 percent of the total number of grants).

As table 53 shows, the total dollar amount of grants given by foundations to types of institutions for categories of aid was examined by use of an analysis of variance statistic. All F-ratios were significant beyond the .001 level. Therefore, it was concluded the means of the dollar amount of grants given by foundations to types of institutions for categories of aid were not equal. The adjusted deviation from the grand mean showed the average grants for scholarships and operating expenses were demonstrably smaller than were the average grants for capital and endowments. Two-year colleges and doctoral institutions showed the largest negative deviation from the grand mean while research institutions evidenced a large positive deviation from the grand mean. The significance of the F-tests was probably accounted for by these differences.

TABLE 53

ANALYSIS OF VARIANCE OF DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS TO TYPES OF INSTITUTIONS FOR CATEGORIES OF AID

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	4,213,377.000	9	468,153.000	34.111	.001
Categories of Aid	3,717,684.000	4	929,421.000	67.720	.001
Type of Foundation	537,329.688	5	107,465.938	7.830	.001
Explained	4,213,392.000	9	468,154.625	34.111	.001
Residual	42,353,936.000	3,086	13,724.539		
Total	46,567,328.000	3,095	15,045.984		

Reject H_0. The means of the dollar amount of grants given by foundations to types of institutions for categories of aid were not equal.

Category of Aid Plus Type of Institution	Number	Deviation from the Grand Mean Unadjusted	Adjusted for Independents
Category of Aid			
Scholarships	488	- 28.53	- 28.34
Capital	232	77.40	80.76
Endowments	12	69.33	68.88
Operating Expenses	1,550	- 22.17	- 22.22
Special Purposes	814	36.24	35.27
Type of Institution			
Research	673	22.94	24.43
Doctoral	182	- 12.31	- 9.80
Comprehensive	512	0.12	- 1.51
Liberal Arts	658	- 6.56	- 10.59
Two-Year	35	- 25.57	- 13.46
Public	1,036	- 7.78	- 6.23
(Grand Mean = 40.98)			

Chi-square was used to analyze the number of grants given by foundations to types of institutions for categories of aid. (See table 54.) Obtained significance beyond the .001 level led to the rejection of the null hypothesis and the conclusion that the number of grants given by foundations to types of institutions for categories of aid was not distributed evenly among types of institutions which received those grants. Both between and among purposes there was great variation in the total number of grants received by each type of institution. Again doctoral and two-year colleges contributed to the level of significance by receiving a lower percentage of grants for each category than were received by the other types of institutions. Public colleges and universities received almost half of all the scholarship grants awarded and also received a disproportionately high percentage of special purpose grants. Liberal arts institutions received a relatively high percentage of capital fund grants. With the exception of public institutions, all types of institutions received over half of their total number of grants for operating expenses. All of these differences contributed to the magnitude of the chi-square.

Total Number and Dollar Amount of Multiple Year Grants Given by Foundations to Types of Institutions

Almost 30 percent of the grant dollars in this study were given as multiple year grants. (See table 55.) Private institutions received almost twice as many multiple year

TABLE 54

CHI-SQUARE ANALYSIS OF NUMBER OF GRANTS GIVEN BY FOUNDATIONS TO TYPES OF INSTITUTIONS FOR CATEGORIES OF AID

Category of Aid	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Scholarships	Count	100	27	60	63	4	234		
	Row %	20.5	5.5	12.3	12.9	0.8	48.0		
	Column %	14.9	14.8	11.7	9.6	11.4	22.6		
	Total %	3.2	0.9	1.9	2.0	0.1	7.6	488	15.8
Capital Funds	Count	26	11	66	89	2	38		
	Row %	11.2	4.7	28.4	38.4	0.9	16.4		
	Column %	3.9	6.0	12.9	13.5	5.7	3.7		
	Total %	0.8	0.4	2.1	2.9	0.1	1.2	232	7.5
Endowments	Count	3	1	1	3	. . .	4		
	Row %	25.0	8.3	8.3	25.0	. . .	33.3		
	Column %	0.4	0.5	0.2	0.5	. . .	0.4		
	Total %	0.1	. . .	. . .	0.1	. . .	0.1	12	0.4
Operating Expenses	Count	342	99	286	360	26	437		
	Row %	22.1	6.4	18.5	23.2	1.7	28.2		
	Column %	50.8	54.4	55.9	54.7	74.3	42.2		
	Total %	11.0	3.2	9.2	11.6	0.8	14.1	1,550	50.1

TABLE 54 - Continued

Category of Aid	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Special Purposes	Count	202	44	99	143	3	323		
	Row %	24.8	5.4	12.2	17.6	0.4	39.7		
	Column %	30.0	24.2	19.3	21.7	8.6	31.2		
	Total %	6.5	1.4	3.2	4.6	0.1	10.4	814	26.3
Column Total	Count	673	182	512	658	35	1,036	3,096	
	%	21.7	5.9	16.5	21.3	1.1	33.5		100.0

For $\alpha = .001$ with 20 degrees of freedom need $X^2 = 45.32$

$X^2 = 194.30$

Reject H_0. The total number of grants given by foundations to types of institutions for categories of aid was not equally distributed among types of institutions.

TABLE 55

TOTAL NUMBER AND DOLLAR AMOUNT OF MULTIPLE YEAR GRANTS GIVEN BY FOUNDATIONS TO TYPES OF INSTITUTIONS

Type of Institution	Multiple Year Grants Total $	Multiple Year Grants Total #	Total Foundation Grants Total $	Total Foundation Grants Total #
Private				
Research	15,650,315	105	43,048,638	680
% of Mult. Yr. Support	41.7	25.9		
% of Inst. Total	36.4	15.4		
% of Higher Educ. Total	12.3	3.4	33.9	21.9
Doctoral	1,029,061	23	5,218,769	182
% of Mult. Yr. Support	2.7	5.6		
% of Inst. Total	19.7	12.6		
% of Higher Educ. Total	0.8	0.7	4.1	5.9
Comprehensive	3,203,124	41	21,046,053	512
% of Mult. Yr. Support	8.5	10.1		
% of Inst. Total	15.2	8.0		
% of Higher Educ. Total	2.5	1.3	16.6	16.5
Liberal Arts	4,213,053	80	22,652,230	658
% of Mult. Yr. Support	11.2	19.7		
% of Inst. Total	18.6	12.2		
% of Higher Educ. Total	3.3	2.6	17.8	21.2
Two-Year	110,000	2	539,457	35
% of Mult. Yr. Support	0.3	0.5		
% of Inst. Total	20.4	5.7		
% of Higher Educ. Total	.09	.06	0.4	1.1
Total Private	24,205,553	251	92,505,156	2,064
% of Mult. Yr. Support	64.4	61.8		
% of Inst. Total	26.2	12.2		
% of Higher Educ. Total	19.1	8.1	72.9	66.5
Total Public	13,361,246	155	34,415,013	1,040
% of Mult. Yr. Support	35.6	38.2		
% of Inst. Total	38.8	14.9		
% of Higher Educ. Total	10.5	5.0	27.1	33.5
TOTAL	37,566,799	406	126,920,169	3,104
Percent	29.6	13.1		
Black	1,068,917	21	11,169,332	190
% of Mult. Yr. Support	2.8	5.2		
% of Inst. Total	9.6	11.1		
% of Higher Educ. Total	0.8	0.7	8.8	6.1

NOTE: Slight variations from totals in table 39 due to rounding error.

grants as did public universities and colleges; i.e., 64.4 percent of multiple year grants were for private institutions and 35.6 percent were for public institutions. By far the highest percent (41.7 percent) went to research institutions. The other four types of private institutions received 11 percent or less of the total grant dollars given for multiple year grants. Only 2.8 percent of the multiple year total grant dollars went to black institutions although this was almost 10 percent of the total dollars received by black institutions.

Multiple year grants were a small (13.1 percent) number of the total grants given to institutions. Again the majority (61.8 percent) of the number of grants went to private institutions. However, the number of multiple year grants was more evenly distributed than were the grant dollars for multiple year support. Of the total number of grants given for multiple year support, research institutions received 26 percent, liberal arts colleges were given almost 20 percent, while comprehensive institutions received slightly more than 10 percent, doctoral institutions received 5.6 percent. Only two grants, or 0.5 percent, in this study were given as multiple year support for two-year colleges.

It was beyond the scope of this study to calculate an analysis of variance test on multiple year support to types of institutions.

As can be seen from table 56, a significance level above .001 was obtained when a chi-square was computed for the number of multiple year grants given by foundations to types of institutions. From this analysis it was concluded the total number of multiple year grants given by foundations to types of institutions was not evenly distributed among types of institutions. Doctoral universities contributed to the magnitude of chi-square by receiving fewer grants than would have been expected on the basis of a theoretical frequency whereas public institutions contributed in the direction of receiving a larger number of grants than would have been expected. Two-year colleges did not receive a sufficient number of multiple year grants to be included in this analysis.

TABLE 56

CHI-SQUARE ANALYSIS OF NUMBER OF MULTIPLE YEAR GRANTS GIVEN BY FOUNDATIONS TO TYPES OF INSTITUTIONS

Type of Institution	f_o Observed Frequency	f_T Theoretical Frequency	$\frac{(f_o-f_T)^2}{f_T}$
Research	105	67	22
Doctoral	23	67	29
Comprehensive	41	67	10
Liberal Arts	80	67	3
Two-Year	2*	. . .	. . .
Public	155	67	116
Total	404		180

*X^2 was not computed for two-year colleges because this cell contained less than five. There was no logical way to combine this cell with another.

For α = .001 with 4 degrees of freedom need $X^2 = 18.46$

$X^2 = 180$

Reject H_0. The total number of multiple year grants given by foundations to types of institutions was not evenly distributed among types of institutions (excluding two-year colleges).

Total Number and Dollar Amount of Grants Given By Local, Regional, and National Foundations to Types of Institutions

When the total number of grants and the total dollar amount of grants given by foundations were compiled, it was seen that local, regional, and national foundations all awarded more support to private rather than public institutions of higher education. (See table 57.) The degree of support was highest in the case of regional foundations which gave private institutions 87.5 percent of their total grant dollars and 76.8 percent of their total number of grants. National foundations gave private institutions 70.7 percent of their grant dollars and 61.5 percent of their total number of grants. Private institutions received 66.8 percent of the grant dollars of local foundations and 75.8 percent of the grants awarded by these foundations.

With the exception of the number of grants received by two-year colleges, all of the types of institutions received the greatest percent of their grant dollars and number of grants from the foundations which were national in geographical orientation. This was particularly true of black institutions which received 97 percent of their grant dollars from national foundations. Local foundations contributed the lowest percent of the total grant dollars and number of grants to each type of institution. This pattern of funding was the reverse of the number of foundations in each category which was the highest for local foundations and the lowest for national foundations.

The proportions of support given to each type of institution varied by foundation geographical orientation. For example, research institutions received over a third of the total grant dollars given by local and national foundations but received approximately a quarter of the total grant dollars given by regional foundations. Comprehensive insti-

TABLE 57

TOTAL NUMBER AND DOLLAR AMOUNT OF GRANTS GIVEN BY LOCAL, REGIONAL, AND NATIONAL FOUNDATIONS TO TYPES OF INSTITUTIONS

	Geographical Orientation of Foundations			
	Local Foundation Grants		Regional Foundation Grants	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	3,680,107	64	4,679,739	162
% by Geography	34.8	18.2	24.8	22.7
% of Inst. Total	8.4	10.5	12.3	26.6
% of Higher Educ.	2.9	2.2	4.2	5.6
Doctoral	187,062	21	807,473	39
% by Geography	1.8	6.0	4.3	5.5
% of Inst. Total	3.6	12.3	15.5	22.8
% of Higher Educ.	0.1	0.7	0.6	1.4
Comprehensive	1,624,094	79	5,306,639	140
% by Geography	15.3	22.5	28.2	19.6
% of Inst. Total	8.0	16.4	22.7	29.0
% of Higher Educ.	1.3	2.7	3.6	4.9
Liberal Arts	1,518,117	91	5,584,076	194
% by Geography	14.3	25.9	29.6	27.2
% of Inst. Total	6.7	14.4	24.7	30.7
% of Higher Educ.	1.2	3.2	4.4	6.7
Two-Year	62,925	11	118,511	13
% by Geography	0.6	3.1	0.6	1.8
% of Inst. Total	11.7	31.4	22.0	37.1
% of Higher Educ.	.05	0.4	.09	0.5
Total Private	7,072,305	266	16,496,439	548
% by Geography	66.8	75.8	87.5	76.8
% of Inst. Total	7.6	13.8	17.8	28.4
% of Higher Educ.	5.6	9.2	13.0	19.0
Total Public	3,509,800	85	2,348,759	166
% by Geography	33.2	24.2	12.5	23.2
% of Inst. Total	10.2	9.0	6.8	17.5
% of Higher Educ.	2.8	3.0	1.9	5.8
TOTAL	10,582,105	351	18,845,197	714
Percent	8.3	12.2	14.8	24.8
Black	36,725	11	298,732	42
% by Geography	0.3	3.1	1.6	5.9
% of Inst. Total	0.3	6.1	2.7	23.5
% of Higher Educ.	.03	0.4	0.2	1.5

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 57 - Continued

Type of Institution	Geographical Orientation of Foundations			
	National Foundation Grants		Total Foundation Grants	
	Total $	Total #	Total $	Total #
Private				
Research	34,688,805	382	43,048,651	608
% by Geography	35.6	21.1		
% of Inst. Total	79.3	62.8		
% of Higher Educ.	27.3	13.3	33.9	21.1
Doctoral	4,224,234	111	5,218,769	171
% by Geography	4.3	6.1		
% of Inst. Total	80.9	64.9		
% of Higher Educ.	3.3	3.9	4.1	5.9
Comprehensive	14,115,322	264	21,046,055	483
% by Geography	14.5	14.6		
% of Inst. Total	69.3	54.7		
% of Higher Educ.	11.1	9.2	16.6	16.8
Liberal Arts	15,550,036	347	22,652,229	632
% by Geography	15.9	19.1		
% of Inst. Total	68.6	54.9		
% of Higher Educ.	12.3	12.1	17.8	22.0
Two-Year	358,021	11	539,457	35
% by Geography	0.4	0.6		
% of Inst. Total	66.4	31.4		
% of Higher Educ.	0.3	0.4	0.4	1.2
Total Private	68,936,418	1,115	92,505,162	1,929
% by Geography	70.7	61.5		
% of Inst. Total	74.5	57.8		
% of Higher Educ.	54.3	38.8	72.9	67.0
Total Public	28,556,449	698	34,415,008	949
% by Geography	29.3	38.5		
% of Inst. Total	83.0	73.5		
% of Higher Educ.	22.5	24.3	27.1	33.0
TOTAL	97,492,867	1,813	126,920,170	2,878
Percent	76.8	63.0		
Black	10,833,869	126	11,169,326	179
% by Geography	11.1	7.0		
% of Inst. Total	97.0	72.1		
% of Higher Educ.	8.5	4.4	8.8	6.2

NOTE: Slight variations from totals in table 39 due to rounding error.

tutions, on the other hand, received 28.2 percent of the regional foundation grant dollars and approximately 15 percent of the grant dollars given by local and by national foundations.

When viewed by geographical orientation, foundations awarded the lowest percentage of both the number of grants and the total grant dollars to doctoral and two-year institutions. National foundations and local foundations awarded over one-third of their grant dollars to research institutions and heavily supported public institutions, while regional foundations divided their grant dollars more equally between liberal arts and comprehensive institutions, and, to a slightly lower extent, research institutions.

An analysis of variance was computed for the dollar amount of grants given by local, regional, and national foundations to types of institutions. (See table 58.) All F-ratios were significant beyond the .001 level. It was concluded the means of the dollar amount of grants given by local, regional, and national foundations to types of institutions were not equal. The adjusted deviation from the subgroup means of local, regional, and national foundations showed local and regional foundation grant means were smaller than national foundation grant means. Again, two-year colleges contributed the largest negative deviation from the grant mean while research institutions showed the single positive difference from the grand mean. In order of magnitude, two-year, doctoral, public, and liberal arts

TABLE 58

ANALYSIS OF VARIANCE OF DOLLAR AMOUNT OF GRANTS GIVEN BY LOCAL, REGIONAL, AND NATIONAL FOUNDATIONS TO TYPES OF INSTITUTIONS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	1,080,753.000	7	154,393.250	9.358	.001
Geographical Orientation of Foundations	85,294.313	2	242,647.125	14.707	.001
Type of Institution	619,149.688	5	123,829.938	7.505	.001
Explained	1,080,768.000	7	154,395.379	9.358	.001
Residual	47,352,224.000	2,870	16,499.031		
Total	48,432,992.000	2,877	16,834.547		

Reject H_0. The means of the dollar amount of grants given by local, regional, and national foundations were not equal.

Geographical Orientation of Found. Plus Type of Institution	Number	Deviation from the Grand Mean: Unadjusted	Deviation from the Grand Mean: Adjusted for Independents
Geographical Orientation			
Local	351	-13.94	- 13.55
Regional	714	-17.71	- 18.84
National	1,813	9.67	10.04
Type of Institution			
Research	608	26.70	26.84
Doctoral	171	-13.58	- 14.41
Comprehensive	483	- 0.53	1.66
Liberal Arts	632	- 8.26	- 6.04
Two-Year	35	-28.69	- 20.59
Public	949	- 7.84	- 10.71

(Grand Mean = 44.10)

TABLE 60

TOTAL NUMBER AND DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS TO TYPES OF INSTITUTIONS

	Region 1		Region 2	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	28,301,749	372	8,961,665	109
% of Region	47.9	26.5	20.9	16.2
% of Inst. Total	64.7	61.2	22.1	17.9
% of Higher Educ.	22.3	12.9	7.6	3.8
Doctoral	1,948,888	94	2,538,075	40
% of Region	3.3	6.7	5.9	5.9
% of Inst. Total	37.3	55.0	48.6	23.4
% of Higher Educ.	1.5	3.3	2.0	1.4
Comprehensive	5,928,307	191	9,855,227	139
% of Region	10.0	13.6	23.0	20.6
% of Inst. Total	29.1	39.5	45.0	28.8
% of Higher Educ.	4.7	6.6	7.2	4.8
Liberal Arts	4,463,531	233	12,155,164	200
% of Region	7.6	16.6	28.3	29.7
% of Inst. Total	19.7	36.9	53.7	31.6
% of Higher Educ.	3.5	8.1	9.6	6.9
Two-Year	208,325	14	209,121	10
% of Region	0.4	1.0	0.5	1.5
% of Inst. Total	38.6	40.0	38.8	28.6
% of Higher Educ.	0.2	0.5	0.2	0.3
Total Private	40,850,800	904	33,719,252	498
% of Region	69.1	64.4	78.6	73.9
% of Inst. Total	44.2	46.7	36.4	25.8
% of Higher Educ.	32.2	31.4	26.7	17.3
Total Public	18,268,605	500	9,183,812	176
% of Region	30.9	35.6	21.4	26.1
% of Inst. Total	53.1	52.7	26.7	18.6
% of Higher Educ.	14.4	17.4	7.2	6.1
TOTAL	59,119,405	1,404	42,903,064	674
Percent	46.6	48.8	33.8	23.4
Black	7,677,937	77	2,807,909	34
% of Region	13.0	5.5	6.5	5.0
% of Inst. Total	68.7	43.0	25.1	19.0
% of Higher Educ.	6.0	2.7	2.2	1.2

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 60 - Continued

	Region 3		Region 4	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	168,300	7	3,217,239	42
% of Region	2.3	5.3	59.2	18.5
% of Inst. Total	0.4	1.2	7.4	6.9
% of Higher Educ.	0.1	0.2	2.5	1.5
Doctoral	570,562	10	70,850	15
% of Region	7.9	7.5	1.3	6.6
% of Inst. Total	10.9	5.8	1.4	8.8
% of Higher Educ.	0.4	0.3	.05	0.5
Comprehensive	2,391,800	19	532,035	42
% of Region	33.3	14.3	9.8	18.5
% of Inst. Total	11.7	3.9	2.6	8.7
% of Higher Educ.	1.9	0.7	0.4	1.5
Liberal Arts	2,750,000	30	304,165	49
% of Region	38.4	22.6	5.6	21.6
% of Inst. Total	12.1	4.7	1.3	7.8
% of Higher Educ.	2.2	1.0	0.2	1.7
Two-Year	30,000	2	4,000	2
% of Region	0.4	1.5	.07	0.9
% of Inst. Total	5.6	5.7	0.7	5.7
% of Higher Educ.	.02	0.1	.003	0.1
Total Private	5,910,662	68	4,128,289	150
% of Region	82.3	51.1	76.0	66.1
% of Inst. Total	6.4	3.5	4.5	7.8
% of Higher Educ.	4.7	2.4	3.3	5.2
Total Public	1,266,547	65	1,302,516	77
% of Region	17.7	48.9	24.0	33.9
% of Inst. Total	3.7	6.8	3.8	8.1
% of Higher Educ.	1.0	2.3	1.0	2.7
TOTAL	7,177,209	133	5,430,805	227
Percent	5.7	4.6	4.3	7.9
Black	14,550	6	45,583	17
% of Region	0.2	4.5	0.8	7.5
% of Inst. Total	0.1	3.4	0.4	9.5
% of Higher Educ.	1.1	0.2	0.04	0.6

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 60 - Continued

	Region 5		Region 6	
Type of Institution	Total $	Total #	Total $	Total #
Private				
Research	942,332	31	492,800	15
% of Region	34.8	19.4	9.0	10.8
% of Inst. Total	2.2	5.1	1.1	2.5
% of Higher Educ.	0.7	1.1	0.4	0.5
Doctoral	6,000	2	. . .	. . .
% of Region	0.2	1.3	. . .	. . .
% of Inst. Total	0.1	1.2	. . .	. . .
% of Higher Educ.	.004	0.1	. . .	. . .
Comprehensive	513,650	33	1,645,935	47
% of Region	18.9	20.6	30.2	33.8
% of Inst. Total	2.5	6.8	8.1	9.7
% of Higher Educ.	0.4	1.1	1.3	1.6
Liberal Arts	510,235	45	1,736,289	38
% of Region	18.8	28.1	31.8	27.3
% of Inst. Total	2.2	7.1	7.7	6.0
% of Higher Educ.	0.4	1.6	1.4	1.3
Two-Year	27,000	4	60,011	2
% of Region	1.0	2.5	1.1	1.4
% of Inst. Total	5.0	11.4	11.1	5.7
% of Higher Educ.	.02	0.1	.05	0.1
Total Private	1,999,217	115	3,935,035	102
% of Region	73.7	71.9	72.2	73.4
% of Inst. Total	2.2	6.0	4.3	5.3
% of Higher Educ.	1.6	4.0	3.1	3.5
Total Public	711,830	45	1,516,950	37
% of Region	26.3	28.1	27.8	26.6
% of Inst. Total	2.1	4.7	4.4	3.9
% of Higher Educ.	0.6	1.6	1.2	1.3
TOTAL	2,711,047	160	5,451,985	139
Percent	2.1	5.6	4.3	4.8
Black	220,149	29	254,000	8
% of Region	8.1	18.1	4.7	5.8
% of Inst. Total	2.0	16.2	2.3	4.5
% of Higher Educ.	0.2	1.0	0.2	0.3

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 60 - Continued

Type of Institution	Region 7 Total $	Region 7 Total #	Region 8 Total $	Region 8 Total #
Private				
Research	747,562	27	190,000	3
% of Region	48.0	28.4	8.2	9.4
% of Inst. Total	1.7	4.4	0.4	0.5
% of Higher Educ.	0.6	0.9	0.1	0.1
Doctoral	58,394	7	26,000	3
% of Region	3.7	7.4	1.1	9.4
% of Inst. Total	1.1	4.1	0.5	1.8
% of Higher Educ.	0.05	0.2	0.02	0.1
Comprehensive	87,110	10	. . .	. . .
% of Region	5.6	10.5	. . .	. . .
% of Inst. Total	0.4	2.1	. . .	. . .
% of Higher Educ.	0.07	0.3		
Liberal Arts	481,146	25	207,000	7
% of Region	30.9	26.3	8.9	21.9
% of Inst. Total	2.1	4.0	0.9	1.1
% of Higher Educ.	0.4	0.9	0.2	0.2
Two-Year	. . .	. . .	. . .	. . .
% of Region	. . .	. . .	. . .	. . .
% of Inst. Total	. . .	. . .	. . .	. . .
% of Higher Educ.	. . .	. . .	. . .	. . .
Total Private	1,374,202	69	423,000	13
% of Region	88.2	72.6	18.3	40.6
% of Inst. Total	1.5	3.6	0.5	0.7
% of Higher Educ.	1.1	2.4	0.3	0.5
Total Public	183,054	26	1,893,158	19
% of Region	11.8	27.4	81.7	59.4
% of Inst. Total	0.5	2.7	5.5	2.0
% of Higher Educ.	0.1	0.9	1.5	0.7
TOTAL	1,557,256	95	2,316,158	32
Percent	1.2	3.3	1.8	1.1
Black	13,500	4	100,000	1
% of Region	0.9	4.2	4.3	3.1
% of Inst. Total	0.1	2.2	0.9	0.6
% of Higher Educ.	0.01	0.1	0.08	.03

NOTE: Slight variations from totals in table 39 due to rounding error.

TABLE 60 - Continued

Type of Institution	Region 9		Total	
	Total $	Total #	Total $	Total #
Private				
Research	27,000	2	43,047,647	608
% of Region	10.3	14.3		
% of Inst. Total	.06	0.3		
% of Higher Educ.	.02	.07	33.9	21.1
Doctoral	. . .	. . .	5,218,768	171
% of Region	. . .	. . .		
% of Inst. Total	. . .	. . .		
% of Higher Educ.	. . .	. . .	4.1	5.9
Comprehensive	92,000	2	21,046,064	483
% of Region	36.3	14.3		
% of Inst. Total	0.5	0.4		
% of Higher Educ.	.07	0.1	16.6	16.8
Liberal Arts	44,700	5	22,652,230	632
% of Region	17.7	35.7		
% of Inst. Total	0.2	0.8		
% of Higher Educ.	.04	0.2	17.8	22.0
Two-Year	1,000	1	539,457	35
% of Region	0.4	7.1		
% of Inst. Total	0.2	2.9		
% of Higher Educ.	.0008	. . .	0.4	1.2
Total Private	164,700	10	92,505,166	1,929
% of Region	65.0	71.4		
% of Inst. Total	0.2	0.52		
% of Higher Educ.	0.1	0.3	72.9	67.0
Total Public	88,541	4	34,415,013	949
% of Region	35.0	28.6		
% of Inst. Total	0.3	0.4		
% of Higher Educ.	0.07	0.1	27.1	33.0
TOTAL	253,241	14	126,920,179	2,878
Percent	0.2	0.5		
Black	35,700	3	11,169,328	179
% of Region	14.1	21.4		
% of Inst. Total	0.3	1.7		
% of Higher Educ.	0.03	0.1	8.8	6.2

NOTE: Slight variations from totals in table 39 due to rounding error.

number of grants than they gave to public institutions. For grant dollars, this ranged from a high of over 88 percent of the grant dollars given in region seven to a low of 65 percent in region nine. The number of grants given to private institutions ranged from a high of almost 74 percent in region two to a low of over 50 percent in region three. Only foundations in region eight favored public institutions, giving these institutions over 80 percent of the total grant dollars awarded and almost 60 percent of the total number of grants.

Every type of institution received the majority of its dollar support from foundations in regions one and two. As previously mentioned, these were the foundations which possessed the largest amount of total foundation assets. Research institutions, public colleges and universities, and black institutions all received a greater proportion of their dollar support from foundations in region one while doctoral, comprehensive, and liberal arts institutions all received a greater proportion of their total grant dollars from foundations in region two. Grants to two-year colleges were given in equal proportions from foundations in regions one and two.

The majority of the number of grants given to all types of institutions also came from foundations in regions one and two. Foundations in region one gave the greatest percent of the total number of grants received by all types of institutions.

The degree of grant dollar support given to each type of institution varied in each region. Foundations in region eight awarded the majority of their grant dollars to public institutions, foundations in regions one, four, five, and seven heavily funded research institutions, while foundations in regions two, three, and six gave a large percent of their total grant dollars to comprehensive and liberal arts institutions. Doctoral and two-year institutions did not receive heavy foundation support in any region. In certain regions, foundations did not give these types of institutions any support. Doctoral institutions received no grants from foundations in regions six and nine, while two-year colleges did not receive a grant from any foundations in regions seven or eight. Comprehensive institutions also did not receive a grant from any foundation in region eight.

An analysis of variance was computed for the total dollar amount of grants given to types of institutions by foundation regional location. (See table 61.) All F-ratios were significant above the .001 level. The research hypothesis was accepted: the means of the dollar amount of grants given by foundations in nine geographical regions to types of institutions were not equal. The adjusted deviation from the subgroup means for foundation regional location showed a range of deviation of 63.7. In order of magnitude, foundations located in regions eight, two, and three contributed to the largest positive values while foundations

TABLE 61

ANALYSIS OF VARIANCE OF DOLLAR AMOUNT OF GRANTS GIVEN BY FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS TO TYPES OF INSTITUTIONS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F-ratio
Main Effects	1,281,191.000	13	98,553.125	5.986	.001
Geographical Region	685,731.563	8	85,716.438	5.206	.001
Type of Institution	683,268.500	5	136,653.688	8.300	.001
Explained	1,281,200.000	13	98,553.813	5.986	.001
Residual	47,151,792.000	2,864	16,463.613		
Total	48,432,992.000	2,877	16,834.547		

Reject H_0. The means of the dollar amount of grants given by foundations in nine geographical regions to types of institutions were not equal.

TABLE 61 - Continued

Geographical Region Plus Type of Institution	Number	Deviation from the Grand Mean	
		Unadjusted	Adjusted for Independents
Geographical Regions			
Region 1	1,404	- 1.99	- 3.87
Region 2	674	19.55	21.35
Region 3	133	9.86	16.04
Region 4	227	- 20.18	- 19.35
Region 5	160	- 27.16	- 26.68
Region 6	139	- 4.88	- 2.42
Region 7	95	- 27.71	- 30.06
Region 8	32	28.28	33.64
Region 9	14	- 26.01	- 22.19
Type of Institution			
Research	608	26.70	29.06
Doctoral	171	- 13.58	- 14.74
Comprehensive	483	- 0.53	- 1.32
Liberal Arts	632	- 8.26	- 9.81
Two-Year	35	- 28.69	- 29.23
Public	949	- 7.84	- 7.68
(Grand Mean = 44.10)			

located in regions seven, five, nine, and four contributed to the largest negative values. For types of foundations, two-year and doctoral institutions contributed to the largest negative deviations while research institutions contributed to the large, single positive value. These differences probably accounted for the significance of the F-tests.

As table 62 shows, when a chi-square statistic was applied to the number of grants given by foundations in nine geographical regions to types of institutions, it was significant above the .001 level. From this it was concluded the number of grants given by foundations in nine geographical regions was not evenly distributed among types of institutions. Almost half the total number of grants were seen to come from foundations located in region one. When foundations in regions one and two were combined, over 72 percent of the total number of grants were encompassed. Viewing row percents, it could be seen that foundations in all regions, except region three, gave a lower percentage of grants to doctoral and two-year institutions than were given to other types of institutions. Foundation support varied widely for each type of institution from region to region. For example, comprehensive institutions received over 33 percent of the grants given by foundations in region six and no grants from foundations in region eight. These differences probably accounted for the significance of the chi-square tests.

TABLE 62

CHI-SQUARE ANALYSIS OF NUMBER OF GRANTS GIVEN BY FOUNDATIONS IN NINE GEOGRAPHICAL REGIONS TO TYPES OF INSTITUTIONS

Geo. Region of Found.	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Region 1	Count	372	94	191	233	14	500		
	Row %	26.5	6.7	13.6	16.6	1.0	35.6		
	Column %	61.2	55.0	39.5	36.9	40.0	52.7		
	Total %	12.9	3.3	6.6	8.1	0.5	17.4	1,404	48.8
Region 2	Count	109	40	139	200	10	176		
	Row %	16.2	5.9	20.6	29.7	1.5	26.1		
	Column %	17.9	23.4	28.8	31.6	28.6	18.5		
	Total %	3.8	1.4	4.8	6.9	0.3	6.1	674	23.4
Region 3	Count	7	10	19	30	2	65		
	Row %	5.3	7.5	14.3	22.6	1.5	48.9		
	Column %	1.2	5.8	3.9	4.7	5.7	6.8		
	Total %	0.2	0.3	0.7	1.0	0.1	2.3	133	4.6
Region 4	Count	42	15	42	49	2	77		
	Row %	18.5	6.6	18.5	21.6	0.9	33.9		
	Column %	6.9	8.8	8.7	7.8	5.7	8.1		
	Total %	1.5	0.5	1.5	1.7	0.1	2.7	227	7.9

TABLE 62 - Continued

		Type of Institution						Row Total	
Geo. Region of Found.	No. of Grants	Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Region 5	Count	31	2	33	45	4	45		
	Row %	19.4	1.3	20.6	28.1	2.5	28.1		
	Column %	5.1	1.2	6.8	7.1	11.4	4.7		
	Total %	1.1	0.1	1.1	1.6	0.1	1.6	160	5.6
Region 6	Count	15	. . .	47	38	2	37		
	Row %	10.8	. . .	33.8	27.3	1.4	26.6		
	Column %	2.5	. . .	9.7	6.0	5.7	3.9		
	Total %	0.5	. . .	1.6	1.3	0.1	1.3	139	4.8
Region 7	Count	27	7	10	25	. . .	26		
	Row %	28.4	7.4	10.5	26.3	. . .	27.4		
	Column %	4.4	4.1	2.1	4.0	. . .	2.7		
	Total %	0.9	0.2	0.3	0.9	. . .	0.9	95	3.3
Region 8	Count	3	3	. . .	7	. . .	19		
	Row %	9.4	9.4	. . .	21.9	. . .	59.4		
	Column %	0.5	1.8	. . .	1.1	. . .	2.0		
	Total %	0.1	0.1	. . .	0.2	. . .	0.7	32	1.1

TABLE 62 - Continued

Geo. Region of Found.	No. of Grants	Type of Institution						Row Total	
		Research	Doctoral	Comprehensive	Liberal Arts	Two-Year	Public	Count	Percent
Region 9	Count	2	. . .	2	5	1	4		
	Row %	14.3	. . .	14.3	35.7	7.1	28.6		
	Column %	0.3	. . .	0.4	0.8	2.9	0.4		
	Total %	0.1	. . .	0.1	0.2	. . .	0.1	14	0.5
Column Total	Count	608	171	483	632	35	949	2,878	
	%	21.1	5.9	16.8	22.0	1.2	33.0		100.0

For $\alpha = .001$ with 40 degrees of freedom need $X^2 = 73.42$

$X^2 = 207.84$

Reject H_0. The total number of grants given by foundations in nine geographical regions to types of institutions was not evenly distributed among types of institutions.

Discussion of Hypotheses

Seven hypotheses were included in this study, each of which examined a different variable related to foundation accessibility. Each hypothesis was followed by specific questions related to that hypothesis. This section includes a statement of each hypothesis followed by a discussion of the results in relation to each research question.

Hypothesis 1

There is a significant difference in types of institutions of higher education receiving grants from grant-making foundations.

A. Were foundation grants made to all types of institutions? Table 22 showed that all types of institutions received one or more grants from at least thirty of the 312 foundations included in this study.

B. Were foundations equally accessible to all types of institutions of higher education? The chi-square test for the total number of foundations which gave one or more grants to types of institutions was significant at the .001 level of confidence. (See table 23.) Therefore, it was concluded there was a significant difference in the total number of foundations which gave one or more grants to types of institutions. From this it was concluded foundations were not equally accessible to all types of institutions of higher education.

C. Did certain types of higher education institutions receive different proportions of foundation support?

When an analysis of variance was calculated for the total dollar amount of grants given by foundations to types of institutions, the obtained F-ratio was significant beyond the .001 level. (See table 41.) Therefore, the means of the total dollar amount of grants from foundations to types of institutions were not equal. The number of grants given to types of institutions was examined by means of a chi-square statistic and was significant beyond the .001 level. (See table 42.) It was concluded that the number of grants given by foundations to each type of institution was not equally distributed. The significance levels of both of these results were due to types of higher education institutions receiving different proportions of foundation support as measured by the total dollar amount of grants and the total number of grants.

D. Conclusion: There was a significant difference in: 1) the total number of foundations which gave one or more grants to types of institutions, 2) the distribution of the dollar amount of grants to types of institutions, and 3) in the number of grants given by foundations to each type of institution. Therefore, Hypothesis 1 was accepted. There was a significant difference in types of institutions which received grants from grant-making foundations.

Hypothesis 2

There is a significant difference in grants received by types of institutions of higher education and type of grant-making foundation.

A. Were grants made from all types of foundations to all types of institutions of higher education? From table 25 it can be seen that a minimum of 9.5 percent of both private and corporate foundations made at least one grant to each of the six types of institutions included in this study.

B. Were different types of foundations equally accessible to all types of institutions of higher education? As table 26 shows, the chi-square analysis of the number of private and corporate foundations which gave one or more grants to each of the six types of institutions was significant at the .001 level. Therefore, it was concluded that grants from private foundations and from corporate foundations were not equally distributed among types of institutions. This being the case, private and corporate foundations were not equally accessible to all types of institutions in terms of the number of foundations which gave one or more grants to each of the types of institutions.

C. Did different types of foundations distribute grants equally to all types of institutions of higher education? Both the dollar amount of grants and the number of grants given by types of foundations to types of institutions were examined. An analysis of variance, which was computed for the total dollar amount of grants given by private and corporate foundations, was significant above the .001 level. (See table 44.) The research hypothesis was accepted: the means of the dollar amount of grants given by private and corporate foundations to types of institutions were not equal. Chi-square was used to examine the relationship of the number of grants given by types of foundations to types of institutions. (See table 45.) Significance above the .001 level was obtained resulting in the conclusion that the number of grants given by types of foundations to types of institutions was not evenly distributed among types of institutions. From these analyses of both total dollar amount of grants and the total number of grants given to types of institutions by types of foundations, it was determined that different types of foundations did not distribute grants equally to types of institutions.

D. Was there a specific type of grant-making foundation that a specific type of institution of higher education should apply to for grants in preference to other types of foundations? The answer to this depends on whether an institution is interested in obtaining a grant or is more interested in the dollar amount of the grant. As table 43 shows, although there are far more private than corporate foundations in the foundation population, with the exception of grants to two-year colleges, more corporate foundations than private foundations made one or more grants to the various types of institutions. Corporate foundations made a total of 1,250 grants while private foundations made a total of 1,628. Thus corporate foundations averaged 14.88 grants per foundation in comparison to the private foundation average of 7.12 grants per foundation. As a percentage of the total number of grants from foundations, corporate foundation grants varied for each type of institution, ranging from a low of 29 percent of the total number of foundation grants made to two-year colleges to a high of 50.1 percent of the total number of foundation grants made to public institutions. However, 92.3 percent of the total dollar amount of grants came from private foundations while only 7.7 percent of the total grant dollars came from corporate foundations. The percent of total dollar amount of grants from private foundations ranged from a low of 82.4 percent for doctoral institutions to a high of 96 percent for two-year colleges and for black institutions. In summary, more corporate foundations made grants to each of the types of institutions (excluding two-year colleges) than did private foundations, corporate foundations made 43.4 percent of the total number of grants to institutions, but corporate foundations accounted for only a small amount of the total foundation grant dollars, 7.7 percent. The index of accessibility in table 63 gives more specific details of grants made by each type of foundation to each type of institution.

E. Conclusion: Hypothesis 2 was accepted. There was a significant difference in grants received by types of institutions of higher education and types of grant-making foundations. These relationships applied to: 1) the distribution of grants from private and corporate foundations among types of institutions, 2) the means of the dollar amount of grants given by private and corporate foundations to types of institutions, and 3) the number of grants given by types of foundations to types of institutions.

Hypothesis 3

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and foundation annual total grants; i.e., the total amount of grants paid in the year of record by a foundation.

A. Were foundations, when stratified by total grants awarded, equally accessible to all types of institutions of higher education? The answer to this question depends on which grant stratifications are viewed. The chi-square analysis of the total number of foundations which gave one or more grants to types of institutions was significant for foundations in the grant stratifications of under $100,000, of $100,000 to under $500,000, of $500,000 to under $1 million, and of $1 million to under $3 million. (See table 28.) Therefore, it was concluded that grants from foundations in these four grant stratifications were not equally distributed among types of institutions and so these foundations were not equally accessible to all types of institutions of higher education. For foundations which awarded $3 million and over, the results of the chi-square analysis were not significant. Therefore it was concluded grants from these foundations were equally distributed among the five types of institutions analyzed and these foundations were equally accessible to these types of institutions. However, these foundations did not give enough grants to two-year colleges for this type of institution to be included in the analysis. Therefore, these foundations were not as accessible to two-year colleges as they were to research, doctoral, comprehensive, liberal arts, and public institutions.

B. Was there a difference in funding patterns of higher education by foundations when compared by size of grants to types of institutions from foundations which have been stratified by total annual grants awarded? Both the dollar amount of grants and the number of grants awarded were analyzed in order to answer this question. As table 47 shows, the analysis of variance which was calculated for the dollar amount of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions resulted in significant F-ratios above the .001 level. Therefore it was concluded the means of the total dollar amount of grants given by foundations (stratified by the total dollar amount of grants awarded) to types of institutions were not equal. Chi-square was used to analyze the number of grants given by foundations (stratified by the total dollar amount of grants awarded) to types of institutions and was significant beyond the .001 level. (See table 48.) From this it was determined the number of grants given by foundations (stratified by the total dollar amount of grants awarded) to types of institutions was not equally distributed among types of institutions. Since both the analysis of variance and chi-square yielded significant results, it was concluded the above question could be answered in the affirmative. There was a difference in funding patterns of higher education by foundations when compared by size of grants to types of institutions from foundations which have been stratified by total annual grants awarded.

C. Was there a specific foundation total annual grants range that different types of institutions should apply to for grants in preference to foundations with other total grant sizes? Which range to apply to depends on the type of institution applying for a grant and on whether the institution is interested in obtaining a grant or is more interested in the dollar amount of the grant. For example, from table 46 it can be seen that over 58 percent of the total funding for black institutions came from the one foundation which gave total grants of over $60 million. Eighty-four percent of total funding for black institutions came from the five foundations which awarded total grants of over $20 million. In relation to the number of grants awarded, however, these grants were only 18.4 percent of the total number of grants received by black institutions. Therefore, if a black institution wanted to apply for a large grant, it would do well to apply to a large grant size foundation. However, if it was interested in obtaining a smaller grant it would do well to apply to a foundation which awarded total grants of $100,000 to under $500,000 and those which awarded $3 million to under $20 million since these two grant stratifications together awarded 53.6 percent of the total number of grants given by foundations to black institutions in this study. The index of accessibility which follows in table 63 gives further details of grants made to each type of institution by foundations stratified by total dollar amount of grants awarded.

D. Conclusion: The chi-square analysis of the total number of foundations which gave one or more grants to types of institutions was significant for foundations in the four grant stratifications of under $3 million in total grants awarded. For foundations which awarded $3 million and over the results of the chi-square analysis were not significant. However, two-year colleges did not receive grants from sufficient foundations to be included in the analysis of grants from foundations which awarded total grants of $3 million and above. There was a significant difference between foundations (stratified by total dollar amount of grants awarded) and grants made to types of institutions in the analysis of: 1) the dollar amount of grants, and 2) the number of grants. These significant differences led to acceptance of Hypothesis 3: there was a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and foundation annual total grants.

Hypothesis 4

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and foundation asset size.

A. Were foundations of different asset sizes equally accessible to all types of institutions of higher education? An examination of foundations which gave one or more grants to types of institutions of higher education resulted in a significant chi-square only for foundations with an asset size of $1 million to under $5 million. (See table 30.) Therefore, it was concluded grants from foundations with an asset size of $1 million to under $5 million were not equally distributed among types of institutions whereas grants from foundations in the other asset sizes were equally distributed among types of institutions (excluding two-year colleges in most cases). With the exception of two-year colleges which received fewer grants than the other five types of institutions and with the exception of foundations in the asset size of $1 million to under $5 million, foundations of different asset sizes were equally accessible to types of institutions in terms of giving each type of institution one or more grants.

B. Was there a difference in funding patterns of higher education by foundations when compared by foundation asset size? Funding patterns of grants in relation to the dollar amount of grants and the total number of grants awarded were examined. From table 50 it can be seen that significant F-ratios were obtained in an analysis of the averages of the dollar amount of grants given by foundations (stratified by asset size) to types of institutions. Thus it was concluded the means of the total dollar amount of grants given by foundations (stratified by asset size) to types of institutions were not equal. Table 51 shows the chi-square analysis of the number of grants given by foundations (stratified by asset size) to types of institutions was significant above the .001 level. These results led to the conclusion that the number of grants given by foundations (stratified by asset size) to types of institutions was not evenly distributed among types of institutions. Because of these significant results it was concluded there was a difference in funding patterns of higher education by foundations when compared by foundation asset size.

C. Was there a specific asset size range of foundations that different types of institutions should apply to for grants in preference to foundations with other asset sizes? Again there was an inverse relationship in most cases between size of grant dollar and number of grants. (Refer to table 49.) Each institution must decide whether it will stress grant amount by applying to a large asset size foundation or whether it will try to increase its chances of obtaining a grant by applying to a foundation in the lower range of asset sizes. For example, 74 percent of the grant dollars for two-year colleges came from the twelve foundations which had assets of $100 million to under $2 billion, but these foundations awarded only 17.1 percent of the total number of grants received by two-year colleges. However, 54.3 percent of the total number of grants came from the 206 foundations with an asset size of less than $5 million which awarded only 20.4 percent of the two-year college total grant dollars. The index of accessibility contains more specific details of grants made by foundations to each type of institution in terms of foundation asset size. (See table 63.)

D. Conclusion: Only foundations in the asset size of $1 million to under $5 million yielded a significant chi-square in an examination of foundations which gave one or more grants to types of institutions of higher education. However, it was necessary to exclude two-year colleges from four of the six chi-square calculations of the number of foundations (stratified by asset size) which gave one or more grants to types of institutions. In cases where exclusion of two-year colleges was necessary, it was because two-year colleges did not receive a minimum of grants from foundations in each asset category. Significant differences in grants made to types of institutions and foundations (stratified by asset size) were found in the analysis of: 1) the dollar amount of grants, and 2) the number of grants. Because of these differences Hypothesis 4 was accepted. There was a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and foundation asset size.

Hypothesis 5

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and grant purposes or categories of aid supported by grant-making foundations.

A. Was accessibility of foundations to different types of institutions of higher education related to types of categories of aid supported by foundations? As table 31 shows, the highest percentage of foundations supported operating expenses over any category of aid. The fewest foundations supported endowment grants. Between 0.0 percent to less than 14 percent of foundations gave one or more grants to types of institutions for scholarships, capital funds, and special purposes. Chi-square tests for scholarships, capital funds, operating expense grants, and special purpose grants all were significant so the conclusion was that these grants for these categories of aid were not equally distributed among types of institutions. Thus accessibility of foundations to different types of institutions of higher education was related to types of categories of aid supported by foundations. In general, the level of chi-square significance for scholarships, capital support, and special purpose grants was in large part due to the fact that doctoral institutions received support from fewer foundations than did research, comprehensive, liberal arts, and public institutions. Few foundations supported two-year colleges except in the case of operating support grants and even here two-year colleges received grants from fewer foundations than supported research, comprehensive, liberal arts, and public institutions.

B. What categories of aid to higher education were most likely to be funded by foundations? Again, total grant dollars must be discussed separately from total number of grants. As table 12 shows, almost half the total grant dollars went to special purpose grants. Operating expense grants received 23 percent of the grant dollars, and capital grants were 21.7 percent of the total received. The lowest percent of the grant dollars went for scholarships (4.7 percent) and endowments (1 percent). Regarding the total number of grants, over 50 percent were for operating expenses, 26.2 percent were for special purposes, and 15.7 percent went to scholarships. Only 7.5 percent were for capital, and a tiny 0.4 percent were for endowments.

C. Was there a difference in foundation funding patterns of categories of aid to types of institutions? Funding patterns were examined in relation to both the dollar amount of grants and the number of grants awarded by foundations for categories of aid. Analysis of variance was used to study the total dollar amount of grants awarded for categories of aid to types of institutions. (See table 53.) Obtained results were significant beyond the .001 level. From this it was concluded the means of the dollar amount of grants given by foundations to types of institutions for categories of aid were not equal. As table 54 shows the number of grants given by foundations for categories of aid to types of institutions was analyzed by use of a chi-square statistic. Since the significance level obtained was above .001, it was determined the number of grants given by foundations for categories of aid to types of institutions was not distributed equally among types of institutions which received those grants. The significance of these analyses led to the conclusion that there was a difference in foundation funding patterns of categories of aid to types of institutions from the viewpoint of total dollar amount of grants awarded and total number of grants distributed.

D. Was there a specific type of category of aid certain types of institutions were most likely to find supported by foundations? Support must be separated into grant dollars and number of grants for a meaningful discussion of this question. In regard to grant dollars, there were differences in categories of aid supported for each type of institution. (See table 52.) Over 61 percent of grant dollars given to research institutions were for special purpose grants while over 23 percent were for operating expense grants. Doctoral institutions received only 37 percent of their grant dollars for special purposes while almost 32 percent were for capital funds. Comprehensive institutions received 37.6 percent of their total grant dollars for capital funds and 34.4 percent for operating expenses. For liberal arts institutions the bulk of the grant dollars were for capital (37.3 percent), special purposes (31.2 percent), and operating expenses (28.2 percent). Almost 97 percent of the grant dollars received by two-year colleges were for two purposes: special purpose grants (54.1

percent) and operating expenses (42.8 percent). The majority (64.4 percent) of the public institution total grant dollars were for special purpose grants. Black institutions received the bulk of their grant dollars for special purposes (43.6 percent) and operating expenses (39.2 percent). When the number of grants was viewed, the picture changed for each institution. Over half of the grants received by each type of private institution were for operating expenses while 42.3 percent of the grants received by public institutions were for this purpose. However, as a percentage of the total grant dollars received, operating expenses accounted for a range of only 13 percent for public institutions to almost 43 percent for two-year institutions. As a percent of the total number of grants received, special purposes ranged from 8.6 percent for two-year colleges to 31.1 percent for public institutions. Capital grants ranged from less than 4 percent of the number of grants received by public and research institutions to around 13 percent for comprehensive and liberal arts institutions. Scholarship support was a fairly consistent percentage of the total number of grants ranging from a low of slightly more than 9 percent for liberal arts institutions to around 11 percent for black institutions, two-year colleges and comprehensive institutions, to approximately 14 percent for research and doctoral institutions to a high of 22.6 percent for public colleges and universities. Few institutions were likely to find support for endowments which in all cases were less than 1 percent of the number of grants received.

E. Conclusion: Hypothesis 5 was accepted. There was a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and grant purposes or categories of aid supported by grant-making foundations. This conclusion was based on results which showed significant differences in analysis of: 1) the number of foundations which gave one or more grants to types of institutions for categories of aid, 2) the means of the dollar amount of grants given by foundations to types of institutions for categories of aid, and 3) the number of grants given by foundations to types of institutions for categories of aid.

Hypothesis 6

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and the geographical orientation of foundations; i.e., whether the foundations made grants on a local, regional, or national basis.

A. Was accessibility of foundations to institutions of higher education related to the geographical orientation of foundations? As table 35 shows, as the geographical orientation of foundations broadened the number of foundations in each category decreased and the percentage of foundations which supported each type of institution increased. Though there were fewer national than regionally oriented foundations and fewer national or regional foundations than those that were locally oriented, a higher percentage of national foundations supported each type of institution than did regional foundations and a higher percentage of regional foundations supported each type of institution than did local foundations. In terms of the number of foundations which made one or more grants to types of institutions, significant chi-squares were obtained for each type of foundation's geographical orientation. (See table 36.) Therefore, it was concluded that local foundation grants were not equally distributed among types of institutions, regional foundation grants were not distributed equally among types of institutions, and national foundation grants were not distributed equally among types of institutions. Therefore, accessibility of foundations to institutions of higher education was related to the geographical orientation of foundations.

B. Did the geographical orientation of foundations have an impact on grants to different types of institutions? When an analysis of variance statistic was applied to the dollar amount of grants given by local, regional, and national foundations to types of institutions, all

F-ratios were significant above the .001 level. (See table 58.) From this it was concluded the means of the dollar amount of grants given by local, regional, and national foundations to types of institutions were not equal. The number of grants given by foundations of different geographical orientations to types of institutions was significant above the .001 level when analyzed by a chi-square statistic. (See table 59.) This demonstrated the number of grants given to types of institutions by foundations of varying geographical orientations was not equally distributed among types of institutions. These differences showed geographical orientation of foundations did have an impact on both the dollar amount of grants and the total number of grants given to different types of institutions.

C. Was there a specific foundation geographical orientation that certain types of institutions of higher education were most likely to find supported by foundations? With the exception of the number of grants made to two-year colleges, both the percent of the number of grants received and the percent of the total grant dollars received were the greatest from nationally oriented foundations for all types of institutions. (See table 57.) Both percentages decreased when grants from regional foundations were analyzed, and both percentages were the lowest when grants from locally oriented foundations were viewed. These percentages have been calculated for each individual type of institution in the index of accessibility. (See table 63.)

D. Conclusion: There was a significant difference between foundation geographical orientation and grants made to types of institutions when viewed by: 1) the number of foundations which made one or more grants to types of institutions, 2) the dollar amount of grants given to types of institutions, and 3) the number of grants awarded to types of institutions. Hypothesis 6 was therefore accepted: there was a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and the geographical orientation of foundations.

Hypothesis 7

There is a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and the geographical location of foundations.

A. Was accessibility of foundations to institutions of higher education related to the geographical location of foundations? Looking at table 37, it can be seen that, in general, research, comprehensive, liberal arts, and public institutions received one or more grants from a substantial percent of foundations in the majority of regions. Regional support, however, ranged widely for each type of institution. For example, research institutions received support from over 71 percent of foundations in region one and from only 23.8 percent of foundations in region three. Doctoral and two-year institutions were not supported by as many foundations as were research, comprehensive, liberal arts, and public institutions. The highest percent of foundations which gave doctoral institutions a grant was in region one. Foundations in regions six and nine did not give any grants to doctoral institutions. Two-year institutions received support from only 11.8 percent of foundations in region one and no grants from foundations in regions seven and eight. Table 38 shows chi-square was not significant for foundations in regions three, four, or five, or for foundations in regions six and seven combined. Therefore, it was concluded grants from foundations in these regions were equally distributed among types of institutions. However, this analysis excluded two-year institutions in all five regions and excluded doctoral institutions in region five because of the low number of foundations supporting these types of institutions in these regions. Chi-square was significant for foundations in regions one and two. Because of this it was concluded grants from foundations in these regions were not equally distributed among types of institutions. Therefore, accessibility of foundations was related to the geographical location of foundations in regions one and two for all types of institutions. It was also related to the geographical location of foundations in regions three through seven for two-year colleges in the sense that this type of college did not receive support from a sufficient number of foundations in these regions to be included in the chi-square analysis.

B. Did the geographical location of foundations have an impact on grants made to different types of institutions of higher education? The total dollar amount of grants given to types of institutions by foundations in nine geographical locations was examined by means of an analysis of variance statistic. (See table 61.) All F-ratios were significant above the .001 level. Chi-square was used to analyze the number of grants given by foundations in nine geographical regions to types of institutions and was significant beyond the .001 level. (See table 62.) Because of these significant differences, it was concluded the geographical location of foundations had an impact on both the total number and the total dollar amount of grants made to different types of institutions of higher education.

C. Was there a specific foundation geographical location in which certain types of institutions of higher education were most likely to find foundation support? Foundations in regions one and two provided every type of institution with the majority of its dollar support as well as with the majority of the number of grants received. (See table 60.) However, within each region foundations emphasized support of specific types of institutions. For instance, public institutions received over 80 percent of the dollar amount of grants made in region eight but received less than 12 percent of the dollars awarded by foundations in region seven. Research institutions received almost 48 percent of the grant dollars awarded by foundations in region one and only 2.3 percent of the grant dollars given in region three. Therefore, while foundations in regions one and two were important to all types of institutions, foundations in other regions were important with regard to certain types of institutions. For each institution, the index of accessibility which is presented in table 63 gives further details of grants made by foundations in each geographical region to each type of institution.

D. Conclusion: In analyzing the number of foundations which made one or more grants to each type of institution, chi-square was significant for foundations in regions one and two. It was not significant for foundations in regions three through seven. However, two-year colleges did not receive one or more grants from a large enough number of foundations to be included in the latter analyses. Doctoral institutions did not receive support from a sufficient number of foundations in region five to be included in these analyses. There was a significant difference between regional location of foundations and grants made to types of institutions in the analysis of: 1) the dollar amount of grants given to types of institutions by foundations in nine geographical locations, and 2) the number of grants awarded to types of institutions. Because of these significant differences Hypothesis 7 was accepted: there was a significant relationship between grants received by types of institutions of higher education (from grant-making foundations) and the geographical location of foundations.

Index of Accessibility

The purpose of the following index of accessibility (see table 63) was to provide information for each type of institution that would enable an individual institution to evaluate its chances of receiving a grant from a foundation. In this study the concept of foundation accessibility was broken down into seven hypotheses. Each hypothesis related grants received by types of institutions to a set of independent variables which were concerned with various ways of classifying foundations and foundation grants. All of the information about a foundation which an institution would need to make this index of accessibility a useful tool can be obtained from an IRS 990 tax form. These forms can be viewed at a Foundation Center library or can be ordered from the Internal Revenue Service.

For each type of institution the index of accessibility has presented the relationships between each of the foundation independent variables and the following:

1. The percent of foundations which gave one or more grants to each type of institution
2. The percent of total grant dollars received by each type of institution
3. The percent of the total number of grants received by each type of institution
4. The average dollar amount of the grants received by each type of institution

For example, a private research university could see that 64.3 percent of corporate foundations gave one or more grants to this type of institution, corporate foundations gave 8.1 percent of the total grant dollars received by research institutions, and the average grant by a corporate foundation to research institutions was $14,731. Thus, a research university had a good chance of receiving a grant from a corporate foundation, and the size of the grant averaged less than $15,000. In comparison, a private comprehensive university or college could see that 69 percent of corporate foundations gave one or more grants to this type of institution, corporate foundations accounted for 6.3 percent of the total grant dollars received by comprehensive colleges and universities, 46.9 percent of the total number of grants received by comprehensive institutions in this study came from corporate foundations, and these grants averaged $5,893. Therefore, comprehensive institutions had a slightly better chance of receiving a grant from a corporate foundation than did research universities, but the average amount was $9,000 less than for a research university. Private two-year colleges, on the other hand, received a grant from 9.5 percent of corporate foundations which provided 4 percent of the total grant dollars received by two-year colleges. These grants averaged $2,162. By comparison to research and comprehensive institutions, two-year colleges had the lowest chance of receiving a grant from a corporate foundation. Furthermore, the average amount of grants received by two-year colleges from corporate foundations was substantially less than the average amount received by research or by comprehensive institutions.

An institution could look further and see similar grant data in relation to the total amount of grants awarded by a foundation, the foundation asset size, the categories of aid supported by a foundation, the foundation geographical orientation, and the regional location of the foundation.

It is suggested that an institution of higher education could use the data summary form contained in appendix II when analyzing the grants made by a particular foundation. Use of this summary form would enable an institution seeking grant support to see both the types of institutions funded by a particular foundation as well as the range of the grants which were made.

TABLE 63

INDEX OF ACCESSIBILITY

PART I: RESEARCH INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	55.1	33.9	21.2	$ 70,804
Type of Foundation				
Private	51.8	91.9	61.1	106,623
Corporate	64.3	8.1	38.9	14,731
Total Amount of Grants Awarded by Foundations				
Under $100,000	32.8	0.6	6.4	6,224
$100,000 - Under $500,000	50.9	6.0	29.1	14,592
$500,000 - Under $1 million	80.6	3.9	15.6	17,603
$1 million - Under $3 million	79.3	8.7	14.1	43,764
$3 million - Under $20 million	81.3	30.5	21.2	102,742
$20 million - Under $60 million	100.0	19.7	7.7	180,490
Over $60 million	100.0	30.6	5.9	365,365
Asset Size of Foundations				
Under $1 million	57.1	2.4	11.5	14,908
$1 million - Under $5 million	45.9	4.9	26.1	13,267
$5 million - Under $10 million	56.6	5.5	15.6	24,872
$10 million - Under $25 million	76.2	3.7	9.7	27,020
$25 million - Under $100 million	84.2	14.6	11.3	92,611
$100 million - Under $2 billion	75.0	38.1	19.9	135,609
Over $2 billion	100.0	30.6	5.9	365,365

TABLE 63 - Continued
PART I: RESEARCH INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	10.3	4.7	14.7	$ 20,302
Capital Funds	5.4	10.1	3.8	167,019
Endowments	1.0	0.5	0.4	74,739
Operating Expenses	42.0	23.1	51.2	28,578
Special Purposes	12.2	61.6	29.9	130,574
Multiple Year Grants	6.1	36.4	15.4	149,051
Foundation Geographical Orientation				
Local	33.3	8.4	10.5	57,502
Regional	63.2	12.3	26.8	28,887
National	95.9	79.3	62.7	90,808
Geographical Location of Foundation				
Region 1	71.6	64.7	61.1	76,080
Region 2	47.2	22.1	18.1	82,217
Region 3	23.8	0.4	1.1	24,043
Region 4	56.8	7.4	6.9	76,601
Region 5	56.3	2.2	5.1	30,398
Region 6	36.4	1.1	2.5	32,853
Region 7	66.7	1.7	4.4	27,687
Region 8	40.0	0.4	0.5	63,333
Region 9	20.0	.06	0.3	13,500

TABLE 63

INDEX OF ACCESSIBILITY

PART II: DOCTORAL INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	25.6	4.1	5.9	$ 30,519
Type of Foundation				
Private	19.7	82.4	46.2	54,427
Corporate	41.7	17.6	53.8	9,990
Total Amount of Grants Awarded by Foundations				
Under $100,000	10.9	0.8	4.7	5,327
$100,000 - Under $500,000	23.4	6.9	28.1	7,545
$500,000 - Under $1 million	25.8	4.1	19.3	6,446
$1 million - Under $3 million	41.4	4.9	12.9	11,595
$3 million - Under $20 million	56.3	35.9	23.4	46,834
$20 million - Under $60 million	100.0	41.4	9.4	135,121
Over $60 million	100.0	6.0	2.3	77,720
Asset Size of Foundations				
Under $1 million	28.6	2.2	12.3	5,358
$1 million - Under $5 million	15.9	6.7	25.7	8,006
$5 million - Under $10 million	26.4	3.3	15.2	6,669
$10 million - Under $25 million	28.6	4.9	8.8	17,155
$25 million - Under $100 million	52.6	6.1	10.5	17,700
$100 million - Under $2 billion	83.3	70.8	25.1	85,902
Over $2 billion	100.0	6.0	2.3	77,720

TABLE 63 - Continued

PART II: DOCTORAL INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	5.1	4.6	14.8	$ 8,888
Capital Funds	2.6	31.8	6.0	150,682
Endowments	0.3	9.6	0.5	500,000
Operating Expenses	17.6	17.0	54.4	8,936
Special Purposes	5.4	37.1	24.2	44,014
Multiple Year Grants	4.2	19.7	12.6	44,742
Foundation Geographical Orientation				
Local	13.0	3.6	12.3	8,908
Regional	33.2	15.5	22.8	20,704
National	67.3	80.9	64.9	38,056
Geographical Location of Foundation				
Region 1	30.4	37.3	55.0	20,733
Region 2	29.2	48.6	23.4	63,452
Region 3	28.6	10.9	5.8	57,056
Region 4	29.7	1.4	8.8	4,723
Region 5	6.3	0.1	1.2	3,000
Region 6	. . .	. . .	. . .	. . .
Region 7	40.00	1.1	4.1	8,342
Region 8	60.00	0.5	1.8	8,667
Region 9	. . .	. . .	. . .	. . .

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PART III: COMPREHENSIVE INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	50.6	16.6	16.8	$ 43,574
Type of Foundation				
Private	43.9	93.7	53.1	76,709
Corporate	69.0	6.3	46.9	5,893
Total Amount of Grants Awarded by Foundations				
Under $100,000	23.4	0.5	5.5	4,659
$100,000 - Under $500,000	49.7	7.3	25.9	12,248
$500,000 - Under $1 million	64.5	2.8	17.8	6,849
$1 million - Under $3 million	75.9	9.2	19.9	20,122
$3 million - Under $20 million	81.3	22.3	17.4	55,315
$20 million - Under $60 million	100.0	39.4	11.2	153,535
Over $60 million	100.0	18.5	2.7	299,218
Asset Size of Foundations				
Under $1 million	67.3	2.0	11.8	7,532
$1 million - Under $5 million	33.8	8.2	26.8	13,312
$5 million - Under $10 million	60.4	5.3	13.1	17,607
$10 million - Under $25 million	66.7	4.0	12.0	14,636
$25 million - Under $100 million	73.7	5.1	8.5	26,284
$100 million - Under $2 billion	91.7	56.8	25.1	98,848
Over $2 billion	100.0	18.5	2.7	299,218

TABLE 63 - Continued

PART III: COMPREHENSIVE INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	8.0	4.2	11.5	$ 14,880
Capital Funds	8.0	37.6	12.9	119,849
Endowments	0.3	.07	0.2	15,000
Operating Expenses	36.5	34.4	56.1	25,205
Special Purposes	9.9	23.8	19.3	50,598
Multiple Year Grants	4.5	15.2	8.0	78,125
Foundation Geographical Orientation				
Local	34.8	8.0	16.4	20,558
Regional	56.0	22.7	28.8	37,905
National	81.6	69.3	54.8	53,467
Geographical Location of Foundation				
Region 1	50.0	29.1	39.6	31,038
Region 2	54.2	45.0	28.6	70,901
Region 3	33.3	11.7	3.9	125,884
Region 4	54.1	2.6	8.7	12,668
Region 5	50.0	2.5	6.8	15,565
Region 6	77.3	8.1	9.8	35,020
Region 7	40.0	0.4	2.1	8,711
Region 8	. . .	. . .	. . .	. . .
Region 9	40.0	0.5	0.4	46,000

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PART IV: LIBERAL ARTS INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	55.4	17.8	22.0	$ 35,842
Type of Foundation				
Private	53.1	95.3	67.9	50,312
Corporate	61.9	4.7	32.1	5,263
Total Amount of Grants Awarded by Foundations				
Under $100,000	45.3	1.5	8.2	6,737
$100,000 - Under $500,000	49.7	6.0	25.6	8,393
$500,000 - Under $1 million	74.2	4.7	10.6	15,851
$1 million - Under $3 million	72.4	6.1	17.1	12,748
$3 million - Under $20 million	75.0	25.4	19.0	47,859
$20 million - Under $60 million	100.0	45.3	15.7	103,594
Over $60 million	100.0	11.1	3.8	104,359
Asset Size of Foundations				
Under $1 million	46.9	1.6	6.6	8,710
$ 1 million - Under $5 million	51.0	7.7	25.8	10,716
$ 5 million - Under $10 million	58.5	2.6	11.1	8,553
$10 million - Under $25 million	71.4	3.9	12.7	10,975
$25 million - Under $100 million	57.9	4.9	8.5	20,426
$100 million - Under $2 billion	100.0	68.2	31.5	77,665
Over $2 billion	100.0	11.1	3.8	104,359

TABLE 63 - Continued

PART IV: LIBERAL ARTS INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	8.7	3.1	9.4	$ 11,484
Capital Funds	7.4	37.3	13.5	94,824
Endowments	1.0	0.2	0.5	18,417
Operating Expenses	46.2	28.2	54.7	17,746
Special Purposes	9.9	31.2	21.9	49,007
Multiple Year Grants	5.8	18.6	12.2	52,663
Foundation Geographical Orientation				
Local	37.0	6.7	14.4	16,683
Regional	64.0	24.7	30.7	28,784
National	85.7	68.6	54.9	44,813
Geographical Location of Foundation				
Region 1	54.9	19.7	36.9	19,157
Region 2	59.7	53.7	31.6	60,776
Region 3	42.9	12.1	4.7	91,667
Region 4	54.1	1.3	7.8	6,207
Region 5	59.4	2.2	7.1	11,339
Region 6	54.5	7.7	6.0	45,692
Region 7	60.0	2.1	4.0	19,246
Region 8	40.0	0.9	1.1	29,571
Region 9	60.0	0.2	0.8	8,940

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PART V: TWO-YEAR COLLEGES

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	9.6	0.4	1.2	$ 15,413
Type of Foundation				
Private	9.6	96.0	71.0	20,713
Corporate	9.5	4.0	29.0	2,162
Total Amount of Grants Awarded by Foundations				
Under $100,000	7.8	1.7	14.3	1,880
$100,000 - Under $500,000	6.0	15.9	31.4	7,811
$500,000 - Under $1 million	16.1	5.0	17.1	4,500
$1 million - Under $3 million	17.2	3.4	20.0	2,589
$3 million - Under $20 million	18.8	38.7	8.6	69,670
$20 million - Under $60 million	50.0	35.2	8.6	63,333
Over $60 million	. . .	. . .	. . .	. . .
Asset Size of Foundations				
Under $1 million	8.2	5.6	14.3	6,000
$1 million - Under $5 million	8.3	14.8	40.0	5,707
$5 million - Under $10 million	3.8	1.3	5.7	3,463
$10 million - Under $25 million	19.0	3.5	14.3	3,824
$25 million - Under $100 million	10.5	0.8	8.6	1,500
$100 million - Under $2 billion	41.7	74.0	17.1	66,502
Over $2 billion	. . .	. . .	. . .	. . .

TABLE 63 - Continued

PART V: TWO-YEAR COLLEGES

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	1.3	1.6	11.4	$ 2,125
Capital Funds	0.6	1.5	5.7	4,000
Endowments	. . .	. . .	. . .	. . .
Operating Expenses	7.1	42.8	74.3	8,883
Special Purposes	1.0	54.1	8.6	97,337
Multiple Year Grants	0.6	20.4	5.7	55,000
Foundation Geographical Orientation				
Local	8.0	11.7	31.4	5,720
Regional	8.5	22.0	37.1	9,116
National	16.3	66.4	31.4	32,547
Geographical Location of Foundation				
Region 1	11.8	38.6	40.0	14,880
Region 2	11.1	38.8	28.6	20,912
Region 3	9.5	5.6	5.7	15,000
Region 4	5.4	0.7	5.7	2,000
Region 5	9.4	5.0	11.4	6,750
Region 6	9.1	11.1	5.7	30,006
Region 7	. . .	. . .	. . .	. . .
Region 8	. . .	. . .	. . .	. . .
Region 9	20.0	0.2	2.9	1,000

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PART VI: PUBLIC INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	55.4	27.1	33.0	$ 36,264
Type of Foundation				
Private	50.4	91.6	49.2	67,529
Corporate	69.0	8.4	50.1	5,973
Total Amount of Grants Awarded by Foundations				
Under $100,000	39.1	0.6	4.1	5,390
$100,000 - Under $500,000	56.3	7.5	26.1	10,399
$500,000 - Under $1 million	48.4	4.8	15.8	11,079
$1 million - Under $3 million	69.0	5.7	11.7	17,762
$3 million - Under $20 million	87.5	25.8	25.6	36,433
$20 million - Under $60 million	100.0	29.9	10.3	104,929
Over $60 million	100.0	25.7	6.3	147,170
Asset Size of Foundations				
Under $1 million	57.1	2.7	11.0	8,865
$1 million - Under $5 million	49.0	9.1	26.3	12,546
$5 million - Under $10 million	60.4	4.5	14.1	11,630
$10 million - Under $25 million	61.9	1.4	7.0	7,192
$25 million - Under $100 million	63.2	5.5	5.5	36,259
$100 million - Under $2 billion	83.3	51.2	29.9	62,044
Over $2 billion	100.0	25.7	6.3	147,170

TABLE 63 - Continued

PART VI: PUBLIC INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	13.8	6.2	22.6	$ 9,123
Capital Funds	5.1	14.8	3.7	134,429
Endowments	1.0	1.5	0.4	132,313
Operating Expenses	41.7	13.0	42.3	10,164
Special Purposes	12.8	64.4	31.1	68,611
Multiple Year Grants	4.2	38.8	14.9	86,202
Foundation Geographical Orientation				
Local	42.8	10.2	9.0	41,292
Regional	32.8	6.8	17.5	14,149
National	83.7	83.0	73.5	40,926
Geographical Location of Foundation				
Region 1	45.1	53.1	52.6	36,537
Region 2	56.9	26.7	18.6	52,181
Region 3	76.2	3.7	6.9	19,485
Region 4	56.8	3.8	8.1	16,916
Region 5	53.1	2.1	4.7	15,818
Region 6	63.6	4.4	3.9	40,999
Region 7	60.0	0.5	2.7	7,041
Region 8	100.0	5.5	2.0	99,640
Region 9	80.0	0.3	0.4	22,135

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PART VII: BLACK INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Total Foundations	19.2	8.8	6.2	$ 6,533
Type of Foundation				
Private	16.7	96.1	54.7	109,536
Corporate	26.2	3.9	45.3	5,368
Total Amount of Grants Awarded by Foundations				
Under $100,000	4.7	0.2	2.8	4,210
$100,000 - Under $500,000	16.2	2.9	28.5	6,265
$500,000 - Under $1 million	22.6	0.3	6.7	2,340
$1 million - Under $3 million	27.6	0.8	18.4	2,809
$3 million - Under $20 million	62.5	11.8	25.1	29,291
$20 million - Under $60 million	100.0	25.7	10.6	151,353
Over $60 million	100.0	58.3	7.8	465,298
Asset Size of Foundations				
Under $1 million	22.4	1.2	7.8	9,273
$1 million - Under $5 million	10.2	1.1	15.6	4,278
$5 million - Under $10 million	22.6	1.3	24.0	3,494
$10 million - Under $25 million	19.0	1.8	11.7	9,471
$25 million - Under $100 million	36.8	1.5	5.6	17,100
$100 million - Under $2 billion	75.0	34.8	27.4	79,294
Over $2 billion	100.0	58.3	7.8	465,298

TABLE 63 - Continued

PART VII: BLACK INSTITUTIONS

Independent Variable	Percent of Foundations Which Gave One or More Grants	Percent of Total Grant Dollars Received	Percent of Total Number of Grants Received	Average Dollar Amount of Grants Received
Categories of Aid				
Scholarships	2.2	1.3	11.1	$ 7,095
Capital Funds	1.9	15.7	6.8	135,214
Endowments	0.3	.05	0.5	5,250
Operating Expenses	14.1	39.2	51.6	44,716
Special Purposes	3.8	43.6	30.0	85,528
Multiple Year Grants	2.2	9.6	11.1	50,901
Foundation Geographical Orientation				
Local	7.2	0.3	6.1	3,339
Regional	18.4	2.7	23.5	7,113
National	55.1	97.0	72.1	85,983
Geographical Location of Foundation				
Region 1	18.6	68.7	43.0	99,713
Region 2	16.7	25.1	19.0	82,586
Region 3	23.8	0.1	3.4	2,425
Region 4	10.8	0.4	9.5	2,681
Region 5	34.4	2.0	16.2	7,591
Region 6	9.1	2.3	4.5	31,750
Region 7	20.0	0.1	2.2	3,375
Region 8	20.0	0.9	0.6	100,000
Region 9	60.0	0.3	1.7	11,900

SUMMARY

This chapter began with an overview of the grant support of institutions of higher education in relation to each of the independent variables included in this study. Results were presented in terms of the number of foundations giving one or more grants to types of institutions in relation to each of the independent variables and also in terms of the total number and dollar amount of grants given to types of institutions in relation to each independent variable. Each hypothesis was discussed in relation to each research question which followed it. This chapter ended with an index of accessibility of foundations to each of the types of institutions of higher education included in the study.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

Problem, Purpose, and Methodology

Private and corporate grant-making foundations are an important source of revenue to higher education and yet often have been considered as inaccessible by many institutions of higher education. The purpose of this study was to determine how accessible private, grant-making foundations were to private institutions of higher education.

A random sample of 306 foundations was obtained from the 2,818 foundations listed in the Foundation Directory, sixth edition. (25.) To this sample six large asset foundations that were known to support higher education were added, bringing the total to 312. Of these, eighty-four were corporate foundations and 228 were private. Foundation IRS 990 returns for the 1975 fiscal year provided information on grants made by foundations to institutions of higher education. While the emphasis of the study was on grants made to different types of private institutions, grants made to public institutions as a whole also were recorded. Institutions of higher education were divided into six types according to the Carnegie Commission Classification System of Colleges and Universities: research, doctoral, comprehensive, liberal arts, two-year and public colleges and universities. (8.) Institutions which were predominantly black were further identified by means of the Michael and Turner list. (41.)

A total of 2,878 grants to individual institutions of higher education were obtained from examination of the grant records of the 312 foundations included in this study. The total amount given by these foundations to institutions of higher education was $126,920,000 during FY 1975.

Accessibility was interpreted in terms of whether or not grants were made to institutions of higher education. If a foundation made a grant to an institution of higher education, the foundation was defined as accessible to that type of institution. The concept of accessibility was broken down into seven hypotheses, with each hypothesis being followed by specific questions related to that hypothesis.

Grants to institutions of higher education were analyzed in terms of the following independent variables:

1. Type of foundation; i.e., whether private or corporate
2. Foundations stratified by the total dollar amount of grants awarded
3. Asset size stratifications of foundations
4. Categories of aid supported by foundations; i.e., scholarships, capital funds, endowments, operating expenses, special purposes, with an additional analysis for multiple year grants

5. Geographical orientation of foundations; i.e., whether local, regional, or national
6. Geographical location of foundations; i.e., according to nine regions specified in this study

Each independent variable was analyzed from two perspectives:

1. The number of foundations which gave one or more grants to various types of institutions
2. The total number and dollar amount of grants given to types of institutions

Based on data from these analyses, a set of variables was obtained which institutions of higher education could use to measure their potential success in obtaining funding from foundations; i.e., an index of accessibility.

Results

Overall Numbers and Dollar Amounts of Grants to Higher Education

The overwhelming majority (92.3 percent) of the foundation grant dollars came from private foundations although corporate foundations comprised 26.8 percent of the total number of foundations in the study and gave almost 44 percent of the total number of grants. The majority of foundations (89.7 percent) had assets of less than $25 million, gave the majority of the total number of grants (60.1 percent), but gave only 17.3 percent of the total grant dollars given to higher education. Although the majority (93.3 percent) of foundations awarded total grants of $3 million or less and gave a large proportion (62.7 percent) of the total number of grants, the majority (81.1 percent) of the total dollars given to higher education came from those few foundations which made total grants of $3 million or more. Thus, the few foundations which were large in assets or in total grant dollars awarded dominated giving in relation to the total grant dollars awarded but not in relation to the total number of grants awarded.

Of the total number of grants given to the five categories of aid analyzed in this report, over half went to operating expenses, over a quarter went to special purposes, over 15 percent went to scholarships, 7.5 percent to capital and only 0.4 percent to endowments. However, special purpose grants received almost half the total grant dollars awarded, operating expenses and capital funds each received slightly less than 25 percent, scholarships received less than 5 percent, and endowments received 1 percent. Almost 30 percent of the total grant dollars were given in amounts divided over two or more years; i.e., as multiple year awards.

Although the majority of foundations gave on a local or regional basis (84.3 percent), they gave only 23.1 percent of the total higher education grant dollars. Foundation giving was dominated by national foundations which gave 76.8 percent of the total higher education grant dollars and 63 percent of the total number of grants awarded.

When foundation giving was analyzed by nine geographical regional locations of foundations, giving to higher education was seen to be greatest from foundations in regions one and two. These regions contained the heaviest concentration of the number of foundations (57 percent) and the amount of foundation assets (67.6 percent). Both the majority of the dollar amount of grants given to higher education (80.4 percent) and the number of grants (72.2 percent) came from foundations located in these two regions.

Number of Foundations Which Gave One or More Grants to Types of Institutions

The following results were obtained when the number of foundations which gave one or more grants to types of institutions was analyzed in relation to each of the independent variables. A chi-square statistic was used in each case.

1. Results showed unequal distribution of grants among types of institutions in relation to:
    a. The total number of foundations giving one or more grants to types of institutions
    b. Grants from private foundations
    c. Grants from corporate foundations
    d. Grants from foundations which awarded under $3 million in total grant dollars
    e. Grants from foundations with an asset size of $1 million to under $5 million
    f. Grants for scholarships, capital funds, operating expenses, and special purposes
    g. Grants from local, regional, and national foundations

   h. Grants from foundations in region one, region two, and in regions six and seven (combined)

2. Results showed equal distribution of grants among all types of institutions in relation to grants from foundations with assets of over $100 million
3. Results showed equal distribution of grants among types of institutions, except two-year colleges, in relation to:
   a. Grants from foundations which awarded $3 million to over $20 million in total grant dollars
   b. Grants from foundations with assets of under $1 million and of $5 million to under $100 million
   c. Multiple year grants
   d. Grants from foundations in region three and in region four
4. Excluding doctoral and two-year institutions, results showed equal distribution of grants among types of institutions in relation to grants from foundations in region five

Chi-square cannot be calculated unless there are five or more cases in each cell. In many of these computations, two-year colleges had to be excluded because they did not receive grants from at least five foundations. Two-year colleges received too few grants to be included in the analysis of grants from foundations which awarded $3 million to over $20 million, grants from foundations with assets of under $1 million and from foundations with assets of $5 million to under $100 million, multiple year grants, and grants from foundations in regions three, four, and five. When viewed by all of these variables, foundations were not readily accessible to two-year colleges. In relation to the remaining independent variables, where significant results occurred, two-year colleges always contributed to the significance of the chi-square in the direction of receiving grants from a fewer number of foundations than gave grants to research universities, comprehensive universities and colleges, liberal arts colleges, and public colleges and universities. Doctoral universities contributed to the significance of chi-square in the direction of receiving grants from a fewer number of foundations than gave grants to the other types of institutions when the following independent variables were analyzed: grants from the total number of foundations, grants from private foundations, grants from foundations which awarded less than $3 million, grants from foundations with assets of $1 million to under $5 million, grants for scholarships, capital funds, operating expenses, and special purposes, and grants from local and regional foundations, and grants from foundations in regions six and seven (combined).

Number and Dollar Amount of Grants Given to Types of Institutions

When grants were viewed in terms of the total dollar value of grants given to each type of institution, large differences in foundation support were seen. Research institutions received 33.9 percent of the total grant dollars, liberal arts and comprehensive institutions received an almost equal percent of support (17.8 percent and 16.6 percent respectively), doctoral universities were given 4.1 percent of the total, and two-year colleges received 0.4 percent of the total foundation grant dollars given to institutions of higher education. Public colleges and universities received 27.1 percent of the total foundation grant dollars. When predominantly black institutions were viewed, it was seen they received 8.8 percent of the total grant dollars. As a whole, private institutions received almost 73 percent of the foundation grant dollars. Thus foundations supported primarily private institutions as a group and principally research institutions within this group with a lesser amount of support going to comprehensive and liberal arts schools. Doctoral and two-year institutions received very little foundation support.

To test if these results were significant, the dollar amount of grants given to types of institutions in relation to each independent variable was analyzed by means of a two-way analysis of variance statistic. The following results were obtained:

1. The average dollar amount of grants given by total foundations to types of institutions was not equal
2. The average dollar amount of grants given by private and corporate foundations to types of institutions was not equal

3. The average dollar amount of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions was not equal
4. The average dollar amount of grants given by foundations (stratified by asset size) to types of institutions was not equal
5. The average dollar amount of grants given by foundations to types of institutions for categories of aid was not equal
6. The average dollar amount of grants given by local, regional, and national foundations to types of institutions was not equal
7. The average dollar amount of grants given by foundations in nine geographical regions to types of institutions was not equal

In general, examination of the subgroup means showed that grants to research institutions were of the largest average dollar value whereas grants to two-year colleges were of the smallest average dollar amount. Average dollar grants from private foundations were demonstrably larger than the average dollar grants given by corporate foundations. Grant dollar averages from foundations which awarded a total of $3 million or more were shown to be larger than grant dollar averages from foundations which awarded less than $3 million. Foundations which possessed assets of $100 million or more contributed grants of large dollar values whereas foundations in the asset size of under $100 million gave grants of small dollar values. The average grants for scholarships and operating expenses were demonstrably smaller than the average grants for capital and endowments. Grants from regional and local foundations averaged smaller amounts than the average grants given by national foundations. In order of magnitude, foundations located in regions eight, two, and three contributed to the largest positive mean values while foundations located in regions seven, five, nine, and four contributed to the largest negative values.

Foundation support of types of institutions also showed large differences when analyzed by the total number of grants awarded. Most of the grants awarded went to private institutions which received 67 percent of the number of grants given by foundations in contrast to the 33 percent received by public colleges and universities. Though research institutions received the largest proportion of the total dollar amount of grants awarded (33.9 percent), they tied with liberal arts colleges in receiving the largest percentage of the number of grants awarded, 21.2 percent and 22.0 percent respectively. Comprehensive institutions followed by receiving 16.8 percent of the number of grants while doctoral and two-year institutions received few grants (5.9 percent and 1.2 percent respectively). Predominantly black institutions received 6.2 percent of the total number of grants awarded.

Chi-square was used to examine the distribution of the total number of grants given to types of institutions. Obtained results were:

1. The total number of grants given by total foundations to types of institutions was not evenly distributed among types of institutions
2. The total number of grants given by private and corporate foundations to types of institutions was not evenly distributed among types of institutions
3. The total number of grants given by foundations (stratified by total dollar amount of grants awarded) to types of institutions was not equally distributed among types of institutions
4. The total number of grants given by foundations (stratified by asset size) to types of institutions was not equally distributed among types of institutions
5. The total number of grants given by foundations to types of institutions for categories of aid was not equally distributed among types of institutions
6. The total number of multiple year grants given by foundations to types of institutions was not evenly distributed among types of institutions
7. The total number of grants given by local, regional, and national foundations to types of institutions was not equally distributed among types of institutions
8. The total number of grants given by foundations in nine geographical regions to types of institutions was not evenly distributed among types of institutions

In all of these analyses, doctoral and two-year institutions contributed to the level of significance of chi-square by receiving fewer grants from foundations than would have been expected on the basis of a theoretical frequency. Research and/or public institutions in many of the analyses contributed in the direction of receiving a high proportion of the number of grants awarded. Doctoral institutions received a higher percentage of their grant numbers from corporate rather than private foundations, public colleges and universities received a nearly equal number of grants from private and corporate foundations. Over 50 percent of the number of grants awarded to the remaining types of institutions came from private foundations. Foundations at either extreme of total dollar amount of grants awarded gave a smaller total number of grants than foundations in the middle ranges. Out of seven asset size categories, two provided 46 percent or more of the total number of grants given to all types of institutions. These were foundations which possessed assets of $1 million to under $5 million and those which had assets of $100 million to under $2 billion. All types of institutions except for public colleges and universities received over half of their total number of grants for operating expenses. With the exception of two-year colleges, all institutions received the largest percentage of their total number of grants from national foundations and the smallest percentage of their total number of grants from local foundations. Foundations located in region one provided over half the grant numbers received by research, doctoral, and public institutions. Foundations located in regions one and two combined provided over half the number of grants received by the remaining types of institutions.

Index of Accessibility

An index of accessibility of foundations for each separate type of institution was designed. The index of accessibility was a chart, organized by the independent variables included in this study, showing by types of institutions of higher education: 1) the percent of foundations which made one or more grants, 2) the percent of the total grant dollars received, 3) the percent of the total number of grants received, and 4) the average dollar amount of grants received.

The purpose of this index was to provide information for each type of institution that would enable an individual institution to evaluate its chances of receiving a grant from a foundation. By examining each of these percentages, an individual institution could see where, among the nuances of the independent variables, the highest percentages of grants were given to each type of institution. An individual institution could also evaluate its prospects of receiving a grant from an individual foundation by matching its independent variable characteristics, such as asset size and geographical orientation, to the percentages of grants made by foundations with similar characteristics to that type of institution.

Conclusions

The majority of the statistical results showed foundations were not equally accessible to all types of institutions of higher education. In general, foundations were more accessible to private as opposed to public colleges and universities. Foundations were most accessible to research universities and least accessible to two-year colleges. Liberal arts and comprehensive institutions were usually in the middle ranges of the number of grants received by types of institutions and the dollar amounts of these grants.

The number of foundations which gave one or more grants to each type of institution was examined. It was seen that foundations were not readily accessible to two-year colleges and, when analyzed by the majority of independent variables, often were not accessible to doctoral institutions. Results showed foundations were more equally accessible to research, comprehensive, liberal arts, and public institutions in the sense that these types of institutions received one or more grants from a relatively equal number of foundations when examined in connection with each of the independent variables. However, examination of the magnitude of these grants relative to the number of grants received and the dollar value of these grants showed foundations were not equally accessible to even these types of institutions. That is, even though certain types of institutions received one or more grants from a relatively equal proportion of foundations, the dollar values were not equal and the number of grants awarded was not equally distributed among types of institutions. The average dollar amount of grants to research institutions was larger than were average grants to the other five types of institutions. Two-year colleges in all analyses received the smallest average dollar grants. In relation to many foundation variables, doctoral, public, and liberal arts institutions often received grants of an average dollar value below that of the total foundation average grant dollar value. Grants to comprehensive colleges and universities hovered closely around the average of the grants for the total institutions. Foundations again were not equally accessible to types of institutions when the total number of grants awarded was examined. Large differences in foundation support of types of institutions were seen. All statistical results were significant above the .001 level showing the total number of grants awarded to types of institutions was not evenly distributed among types of institutions in relation to each independent variable. Doctoral and two-year institutions received a low proportion of the total number of grants awarded whereas research and/or public institutions often received a relatively high proportion of the total number of grants awarded.

Another indication of the inaccessibility of foundations to types of institutions was the finding that while only 6 percent or less of total foundations gave multiple year grants almost 30 percent of the grant dollars were given as multiple year grants; i.e., grants divided into amounts given to an institution over two or more years. Excluding two-year colleges, the number of foundations which gave one or more multiple year grants to types of institutions was evenly distributed among types of institutions. However, the number of multiple year grants given by these foundations to types of institutions was not evenly distributed among types of institutions. Over 87 percent of the multiple year grant dollars went to research and public institutions. Thus, not only was 30 percent of the higher education grant dollars unavailable for new applicants, but it was not equally distributed among types of higher education which did receive multiple year grants.

An analysis of the overall number and dollar amount of grants given by foundations to institutions of higher education revealed certain characteristics of foundations to be dominant. Factors related to the total number of grants awarded often showed different patterns than did factors which were related to the total dollar amount of grants awarded. The majority of the grant dollars given to institutions of higher education came from private foundations which made total awards of $3 million or more, had assets of $25 million or more, gave grants on a national basis, and were located in regions one and two. Foundations were most accessible, in terms of total number of grants awarded, to institutions of higher education for the purposes of operating expenses. Other categories of aid which received foundation support were special purposes and scholarships. Capital funds and endowments received little support from foundations from the perspective of total number of grants awarded. Foundations were most accessible, in terms of total grant dollars awarded, to institutions of higher education for special purpose grants. Operating expenses and capital funds also were supported by foundations. Scholarships and endowments were not well supported by foundations.

Certain foundation variables contributed to large average dollar grant sizes. Other variables contributed to grants of a small average dollar value. Foundation variables which contributed to large average dollar amount of grants included: 1) private type of foundation, 2)foundations which awarded a total of $3 million or more in grant dollars, 3) foundation asset sizes of over $100 million, 4) support of capital fund purpose grants, 5) foundation national geographical orientation, and 6) foundation location in regions three, eight and nine. Variables which were related to small average dollar amount of grants were: 1) corporate type of foundation, 2) foundations which awarded under $3 million total grant dollars, 3) foundation asset sizes of under $100 million, 4) support of scholarship and operating expense purpose grants, 5) foundation regional and local geographical orientation, and 6) foundation location in regions four, five, seven and nine.

Variables also were identified which were related to either a high or a low number of grants awarded. A relationship was seen between a high number of grants awarded and: 1) grants from private foundations in the cases of research, liberal arts, comprehensive, and two-year institutions, 2) foundations which awarded a total of $100,000 to under $500,000 and those which awarded a total of $3 million to under $20 million, 3) foundations with assets of $1 million to under $5 million and those with assets of $100 million to under $2 billion, 4) grants for operating expenses except in the case of public institutions, 5) foundation national geographical orientation, and 6) foundation location in regions one and two. A low number of grants awarded was related to: 1) grants from foundations which awarded a total of under $100,000 and from foundations which awarded a total of $60 million, 3) foundations with assets of over $2 billion, 4) support of endowments and capital funds, 5) foundation local geographical orientation, and 6) foundation location in regions three through nine.

Each type of institution showed specific relations to the foundation characteristics which had been identified in the study. Research institutions received grants from over half the sample foundations, received over one-third of the total foundation grant dollars, and a fifth of the total number of grants awarded. The majority of the funds came from private foundations, from foundations which had made total grants of over $3 million, from foundations which had assets of $100 million and above, had a national geographical orientation, and were located in regions one and two. Over 60 percent of the grant dollars were for special purpose grants and over one-third of the dollars were given as multiple year grants. Over 50 percent of the number of grants came from private foundations, foundations which awarded a total of $100,000 to under $500,000 and those which awarded a total of $3 million to $20 million, national foundations, foundations located in regions one and two. Over 46 percent of the number of grants came from foundations with assets of $1 million to under $5 million and assets of $100 million to under $2 billion. Over 50 percent of the number of grants went to operating expense purposes.

Doctoral institutions received grants from only a quarter of the foundations, obtained only 4 percent of the total foundation grant dollars, and less than 6 percent of the total number of grants awarded. A greater percentage of corporate foundations than private foundations awarded research institutions a grant, and slightly over half the number of grants came from corporate foundations. However, the bulk of the grant dollars came from private foundations. Other variables related to larger doctoral institution grant dollars were: 1) foundations which awarded $3 million to over $60 million, 2) foundation assets of $100 million to under $2 billion, 3) foundation national geographical orientation, 4) foundation location in regions one and two, and 5) support of capital funds and special purposes. Few foundations gave doctoral institutions multiple year grants but these grants were almost 20 percent of the grant dollars received by doctoral institutions. The majority of the number of grants to doctoral institutions came from: 1) foundations which made total grants of $100,000 to under $500,000 and those which awarded total grants of $3 million to under $20 million, 2) foundations with assets of $1 million to under $5 million or assets of $100 million to under $2 billion, 3) national geographical orientation, 4) foundations located in region one, 5) support for operating expense purposes.

Over half the foundations made a grant to comprehensive institutions, and these grants were over 16 percent of both the total foundation dollar amount and number of grants awarded to higher education institutions. The grant dollars came for the most part from foundations with the following characteristics: 1) private type, 2) over $3 million total grant dollars awarded, 3) assets of $100 million to under $2 billion, 4) national geographical orientation, 5) location in region two with substantial support also from foundations in region one. Support was given for capital funds, operating expenses, and special purposes. Of total support over 15 percent was given as multiple year grants. Foundation variables related to the number of grants received by comprehensive institutions were: 1) both private and corporate foundations, 2) total grants awarded of $100,000 to under $20 million, 3) assets of $1 million to under $5 million and those with assets of $100 million to under $2 billion, 4) national geographical orientation, 5) location in regions one and two, and 6) support of operating purposes.

Liberal arts colleges often showed patterns similar to those evidenced by comprehensive institutions. Over half the foundations supported this type of institution which received over 17 percent of the foundation grant dollars and 22 percent of the number of grants made by foundations. The bulk of support for liberal arts college grant dollars came from private foundations, foundations which awarded $3 million to under $60 million, had assets of $100 million to under $2 billion, were national in geographical orientation, and were located in region two. Categories supported were capital funds, operating expenses, and special purposes. Almost 20 percent of the grant dollars was given as multiple year grants. The majority of the number of grants came from private foundations, showed the least concentration of any type of institution in relation to foundation total grant dollars awarded, came from foundations with assets of $1 million to under $5 million and of $100 million to under $2 billion, from foundations with national geographical orientation, and which were located in regions one and two. Over half the number of grants went to operating expenses.

Of any type of institution two-year colleges received grants from the least number of foundations and were allocated the smallest percentage of both the total foundation grant dollars and the total number of grants. Foundation variables related to a high percentage of the grant dollars were: 1) private type, 2) total grants of $3 million to under $60 million, 3) assets of $100 million to under $2 billion, 4) national geographical orientation, 5) location in regions one and two, 6) support for special purposes and operating expense grants. The majority of the number of grants came from: 1) private foundations, 2) foundations which awarded $100,000 to under $500,000 and those which awarded $1 million to under $3 million, 3) foundations located in regions one and two. Over 40 percent of the number of grants came from foundations with assets of $1 million to under $5 million. This was the only type of institution which received a fairly even distribution of its number of grants from foundations of all geographical orientations. Most of the grant numbers were for operating expenses. Although two-year colleges received multiple year grants from less than 1 percent of foundations, these grants were over one-fifth of the total grant dollars received.

More than half the foundations made a grant to a public institution. These institutions received over 27 percent of the foundation grant dollars and 33 percent of the number of grants awarded. Variables related to high grant dollars were: 1) private foundation, 2) over $3 million in total grants awarded, 3) assets of over $100 million, 4) national geographical orientation, 5) location in region one, 6) support for special purposes. Over 38 percent of the grant dollars were given as multiple year grants. Receipt of a high percentage of grant numbers was highly related to foundations which had: 1) total grants of $100,000 to under $500,000 or of $3 million to under $20 million, 2) assets of $1 million to under $5 million or of $100 million to under $2 billion, 3) national geographical orientation, 4) location in region one. The number of grants was distributed between scholarships, operating expenses, and special purposes.

While black colleges and universities were not included in the statistical analyses because they had been identified separately once they had been included in each of the classifications of types of institutions, certain conclusions were reached about foundation grants to black institutions. Although over 19 percent of foundations gave one or more grants to black institutions, the dollar amount and number of grants awarded were concentrated among only a few foundations. Variables related to a high dollar support were: 1) private foundations, 2) total grants awarded of $3 million or more, 3) assets of $100 million and over, 4) national geographical orientation, 5) location in regions one and two, 6) support of operating expenses and special purposes. Over 58 percent of the dollar support came from the Ford Foundation alone. The number of grants showed a different pattern among foundations in that the majority came from: 1) both private and corporate foundations, 2) foundations which awarded $100,000 to under $500,000 and those which awarded $3 million to under $20 million, 3) foundations with assets of $5 million to under $10 million and those with assets of $100 million to under $2 billion, 4) foundations with national geographical orientation, 5) foundations located in regions one and two, and 6) support of special purposes and operating expenses. Little of this support was given in the form of multiple year grants.

From the above it can be seen that factors which contributed to a large dollar amount of grants were not always the same as those which contributed to a large number of grants. It can also be seen that factors which were related to foundation accessibility for one type of institution did not always correspond to factors which were related to accessibility for another type of institution. Because of these differences it was concluded each individual institution, when deciding whether or not to apply for a grant from an individual foundation, must weigh each of the factors in relation to its own particular case. The index of accessibility was provided to help facilitate this decision.

Implications

When foundation grants were analyzed by the number of foundations supporting each type of institution and by the amount of that support to each type of institution, the results showed doctoral universities and two-year colleges did not receive a degree of support comparable to that received by the other four types of institutions included in the study. It is not known how many colleges and universities within each type of institution applied to each foundation for grants. To apply for a foundation grant requires a certain expertise in the form of research and proposal writing as well as knowledge about particular foundations. Perhaps two-year institutions have not developed that expertise. It would be surprising, however, if most doctoral institutions had not developed their expertise in that field to some extent.

The Carnegie Classification System divided Doctoral-Granting Institutions into two categories: research universities and doctoral universities. These two categories were differentiated by the amount of federal financial support they received and by the number of Ph.D.'s they awarded. Research I Universities were the fifty leading universities in terms of federal financial support during two of the three academic years between 1972-75 and Research II Universities were on the list of the one hundred leading universities in terms of federal financial support in at least two of the three above years. In comparison, Doctoral-Granting Universities I received at least $3 million in federal support in either 1973-74 or 1974-75 while federal support was not a criterion for inclusion in the category of Doctoral-Granting Universities II. Therefore, research universities, as defined by the Carnegie Classification, were heavily funded by the government while doctoral-granting universities received far less federal support.

When these institutions were viewed from the standpoint of foundation funding, the same pattern could be seen. Research universities were heavily funded by foundations whereas doctoral institutions received only modest foundation support.

Colvard and Bennett suggested the concentration of foundation support among specific types of institutions which they found in their study might be due to both the government and foundations purchasing available expertise. They suggested many grants were not so much to as through colleges and universities for this purpose. (7:2.) If true, this would explain the high degree of funding of research institutions found in this study. It would not explain, however, why comprehensive colleges and universities received a far greater amount of foundation support in both dollars and number of grants than did doctoral institutions.

However, when the number of institutions in each category was analyzed, the results of this study became more coherent. Private research universities were only 1.4 percent of the total number of higher education institutions but received over a third of the funds granted to institutions of higher education. If one accepts Colvard and Bennett's suggestion that both foundations and the government purchase expertise, the fact that one-third of the foundation funds in this study went to research universities becomes understandable. It may be that doctoral institutions are geared to an emphasis on teaching and so do not have the same level of research expertise that research institutions possess. If private doctoral-granting universities do not possess that expertise but are granted funds more nearly in accordance with the fact that they are only 1.2 percent of the total number of institutions and enroll 2.5 percent of the total enrollment, their receipt of 4.1 percent of total foundation funding becomes understandable.

When two-year colleges were analyzed in this manner, it was seen they were 9.5 percent of the total private institutions but had a low percentage of enrollment, 1.4 percent of the total. The fact that they received only 0.4 percent of the total foundation grant dollarsin this study may reflect the fact that foundations felt they were providing two-year institutions grants in proportion to their enrollment.

Liberal arts colleges were 22.8 percent of the total number of institutions, had 4.8 percent of the total enrollment, received 17.8 percent of the total grant dollars, and obtained 22.0 percent of the total number of grants in this study. Comprehensive institutions were 9.6 percent of the total number of institutions, 7.4 percent of the total enrollment, received over 16 percent of both the total grant dollars and the total number of grants. Thus liberal arts institutions received a smaller total grant dollar in proportion to their number while comprehensive institutions received a larger grant dollar than their numerical proportion of total institutions.

The Carnegie Commission, when comparing data from 1970 to 1976, discovered a:

> ...surprisingly pronounced growth of enrollment among private Comprehensive Universities and Colleges II. Much of this growth reflected rapid increases in institutions formerly classified as liberal arts colleges (especially Liberal Arts Colleges II) which had broadened their programs and enrolled additional students--often part-time and evening students--on a sufficient scale to meet the criteria for classification in Comprehensive Universities and Colleges II. (8:vi.)

Thus during 1970-76, comprehensive universities "gained in enrollment and in numbers partly because of shifts of institutions from the liberal arts to the comprehensive category, whereas the reverse was true for the latter." (8:viii-ix.) The fact that neither comprehensive nor liberal arts institutions was funded in proportion to their numerical total may reflect two factors: 1) many formerly liberal arts institutions were changing into the comprehensive institution category, and this was being reflected by strong financial support for comprehensive institutions and weaker dollar support for liberal arts institutions, and 2) foundations were providing financial support for the efforts of institutions to broaden their programs and increase their enrollments.

Even when viewed against their total numbers and large enrollments the low level of foundation support for public, as compared to private, institutions is not surprising. Apparently, most foundations expect public institutions to be publicly supported and are not as likely to provide foundation funds to supplement public funds. In contrast, private higher education institutions did not have comparable access to public funds and were dependent upon private funds as a source of supplemental help during their times of financial need. The lower level of public support for private as opposed to public institutions enabled private institutions to make a stronger case for support from private foundations.

It was mentioned on page 42 that during 1972-77 foundation funding of higher education had been increasing in terms of absolute dollars but slightly decreasing as a percent of the total voluntary support to higher education. At the time of this study, Smith (53.) felt the following accounted for this decrease:

1. Education did not command the paramount interest it did six to eight years ago because there had been the emergence of many new social programs with a higher priority
2. The heyday of expansion in higher education had ended and foundations were freeing up funds for other purposes
3. The federal government had entered areas such as basic research and student aid which were traditionally of

interest to foundations. Many foundations felt the federal government was preempting them in these areas

4. Foundations had fallen on lean years financially. Their principal source of funds has been the earnings on their assets. During recent years they have had little capital gains to disburse and this has affected giving. Smith did stress that dividend income has not decreased; the decrease has been in capital gains
5. Foundation giving had been siphoned off by the 4 percent excise tax

If the first four factors Smith discussed continue to affect foundation giving to higher education, it will mean that foundation funds granted to higher education probably will not increase significantly during the next few years. Thus it is quite possible that foundation funds may not be available to many institutions of higher education during the expected financial difficulties of the next several years. Unless foundations change their priorities, the major increased availability of foundation funds which is foreseen will come from the funds freed for foundation giving by the decrease in the foundation excise tax.

During the fall of 1978 the 4 percent excise tax was decreased to 2 percent, freeing an estimated $35 million a year for philanthropic giving. (20:1.) How much of that money will be disbursed to institutions remains to be seen. Foundations in this study gave 22.4 percent of their total grants to institutions of higher education. If they gave

22.4 percent of the $35 million that is estimated to be available due to the 1978 decrease in the excise tax on foundations, an additional $7,840,000 would be available to institutions of higher education.

In this study, when foundations were stratified into ranges of asset sizes and into ranges of total dollar amount of grants awarded, the tremendous impact of a very few foundations was demonstrated. Almost 80 percent of the total grant dollars to institutions of higher education came from thirteen foundations out of a total of 312 foundations included in this study. These were the thirteen foundations with assets of $100 million and above. Almost 54 percent of the total grant dollars given to institutions of higher education came from the five foundations in this study that awarded a total of over $20 million in grants during 1975. If the sixteen foundations that awarded grants of $3 million to under $20 million are included, over 81 percent of the grant dollars are accounted for.

This has serious implications for institutions of higher education. Foundations do change their program focus periodically, especially the foundations which are large in total grants awarded and which have large assets. Nielsen's book (46.) contains an excellent analysis of the shifting programs and directions of thirty-three of the largest asset size foundations. For certain types of institutions, a shift in foundation direction could result in a significant increase or decrease in the amount of the total grants they receive from foundations.

An example of the impact of the grant program direction of a large asset size foundation can be seen in the case of the Ford Foundation program for black colleges. Over 58 percent of the funds given to black institutions in this study came from the Ford Foundation. From his analysis, Nielsen concluded, "Since World War II, Ford, among all the big foundations, has been by far the largest as well as the most controversial source of grants for blacks." (46:353.) Further on he stated,

> In October 1971, the foundation resoundingly affirmed that its interest in the problems of blacks had not diminished by announcing a massive $100 million commitment to be paid over a six-year period to strengthen a selected group of the better black colleges. (46:357.)

The 1975 grants reported in this study were made during the time of the Ford Foundation program for strengthening black colleges. However, 1977 was the last year for this program. The Ford Foundation Annual Report, 1977 stated that, "Although the special program is drawing to a close, the Foundation will continue its commitment to minorities in different ways." (23:3.) Whether this commitment will include substantial grants to individual black institutions remains to be seen. If such grants are not made by the Ford Foundation, however, the total grant dollars given to black institutions from all foundations will decrease substantially unless other foundations step in to follow the leadership set by the Ford Foundation in this regard.

A general inverse relationship was found between the size of grants given and the number of grants given by foundations in relation to many of the independent variables. This means institutions applying for grants must weigh whether they wish to emphasize applying to foundations which have the characteristics of variables related to giving a high percentage of grants to their type of institution or whether they wish to emphasize applying to foundations which have the characteristics of variables related to giving large dollar value grants. A factor beyond the scope of the study was the impact of obtained grants on various stratum of institutional budgets. It may be that what would seem like a small dollar grant to a large research institution would make an important impact on a school with a relatively small total annual budget. In addition, if an institution stressed variables which increased their chances of obtaining several relatively small grants, the end result might be a total dollar amount equal to what would have been obtained had that institution sought a large grant from foundations which gave only a few grants which were of a large dollar value.

Often to the unsophisticated seeker of funds the word "foundation" is synonymous with the foundations that are large in terms of total asset size and total grants awarded; e.g., the Ford Foundation and the Rockefeller Foundation. College presidents urge their grants officers to apply to such foundations for funding, citing"X"university as having received a large grant from a particular foundation. What is being overlooked in such an approach is the fact that such a foundation may not typically fund that type of institution and, if it does fund that type of institution, may not generally fund it to the extent it funds other types of institutions. For example, no two-year institutions were funded by the Ford Foundation. A conclusion could be reached that Ford does not typically fund two-year institutions. Another example is that the total dollar amount of grants given by the Ford Foundation to doctoral institutions was $310,881 compared to $13,153,154 which was given to research institutions, clearly not an even handed level of support for each type of institution.

The question of accessibility of foundations for funding of an institution which has not previously received foundation funding must be addressed. Almost 30 percent of the grants included in this study went for multiple year grants; i.e., grants divided into amounts given to an institution over two or more years. This meant 30 percent of the total higher education grant dollars were not available for new applicants because this money was committed over a period of time. This has serious implications regarding limitations of a new applicant's potential for obtaining foundation funding. In regard to the latter, Blount noticed while compiling grants made from ten foundations over a decade that the same universities were receiving grants from many of these foundations year after year. (5:250.) It may be that the same institutions are applying for grants year after year to many foundations while other institutions have not developed an expertise in fund-raising techniques. It may be that once an institution has been funded by a foundation it is given preference when it again applies for a grant. In either case, new applicants would have serious problems in obtaining foundation funding.

Recommendations for Further Study

The following are recommended as profitable areas for further study:

1. A study of one group of foundations over a period of time in order to determine if foundations consistently give to the same individual institution and/or type of institution or if the grant recipients change over the years. Such a study would measure how receptive foundations were to funding different institutions as well as provide a measure of the consistency of foundation support of each type of institution and also of foundation support to higher education institutions as a group over a period of time.
2. A study in which public institutions and/or professional and specialized schools were classified into types of institutions according to the Carnegie Classification Scheme and grants made to these institutions were analyzed in terms of foundation variables similar to those used in this study.
3. An expansion of the data in the index of accessibility in regard to the independent variables in order to examine the relationships between these variables.

Examples include an analysis of grants made by private and corporate foundations in each geographical region to each type of institution and an analysis of grants made by local, regional, and national foundations by the total amount of grants awarded to each type of institution. This would enable institutions to evaluate potential funding sources with increased precision.

4. Studies in which the basic research design used in this study was used to examine foundation grants in other fields such as health, welfare, and humanities. That is, grant recipients could be grouped according to a classification scheme, and the same foundation independent variables which were used in this study could be used to analyze accessibility of foundations to these other types of grant recipients.
5. A study of the relationships between the independent variables, particularly in the areas of finding which variables were related to multiple year grants and to grants for categories of aid supported by foundations.
6. A study of grants made by private and corporate foundations to educational organizations and associations which act as intermediaries in disbursing funds. Because of their often diffuse geographical locations, it is more than likely that corporate foundations may distribute more of their funds to higher education through intermediaries than do many private foundations.

APPENDIX

APPENDIX I

CARNEGIE COMMISSION CLASSIFICATION SYSTEM OF COLLEGES AND UNIVERSITIES

The Carnegie Commission Classification System of Colleges and Universities was developed by the Carnegie Commission on Higher Education. The classification includes all institutions listed in the United States National Center for Education Statistics' Education Directory: Colleges and Universities, 1976-77. When a campus of a multicampus institution was listed separately, it was included as a separate institution in the Carnegie Classification System. This resulted in the inclusion of 3,074 institutions. Of these, 1,608 were private institutions.

The classification divided institutions into six main categories and nineteen subcategories. Each institution was listed under each category. There were separate listings for public and private institutions. The following is a summary of each category.

1. Doctoral-Granting Institutions
    a. Research Universities I: the fifty leading universities in terms of federal financial support of academic science in at least two of the three academic years, 1972-73, 1973-74, and 1974-75, provided they awarded at least fifty Ph.D.'s plus M.D.'s if a medical school was on the same campus in

1973-74. Twenty-two institutions, or 43.1 percent, of this group were private.

b. Research Universities II: these universities were on the list of the one hundred leading universities in terms of federal financial support in at least two out of the above three years and awarded at least fifty doctoral degrees in 1973-74, or they were among the leading sixty institutions in terms of the total number of doctoral degrees awarded during the years from 1965-66 to 1974-75. This subcategory contained 29.9 percent, or fourteen, private institutions.

c. Doctoral-Granting Universities I: these institutions awarded forty or more doctoral degrees in at least five fields in 1973-74 or received at least three million dollars in total federal financial support in either 1973-74 or 1974-75 and awarded twenty or more doctoral degrees in at least five fields. Of these, eighteen (32.1 percent) were private.

d. Doctoral-Granting Universities II: these institutions awarded at least twenty doctoral degrees in 1973-74 without regard to field, or ten Ph.D.'s in at least three fields, with the exception of a few new doctoral-granting institutions that were expected to increase the number of doctoral degrees they awarded within a few years. Of this subcategory, eleven institutions (36.7 percent) were private.

2. Comprehensive Universities and Colleges
    a. Comprehensive Universities and Colleges I: these institutions offered a liberal arts program and at least two professional or occupational programs and enrolled 2,000 or more students in 1976. Of these, 131 (34.4 percent) were private institutions.
    b. Comprehensive Universities and Colleges II: these institutions offered a liberal arts program and at least one professional or occupational program and enrolled at least 1,500 students, if private, or at least 1,000 students, if public. One hundred nine (51.2 percent) of these institutions were private.
3. Liberal Arts Colleges
    a. Liberal Arts Colleges I: this group included colleges whose graduates scored well on a selectivity index developed by Alexander W. Austin or which were among the two hundred leading baccalaureate-granting institutions in terms of numbers of their graduates receiving Ph.D. degrees at forty leading doctoral-granting institutions from 1920 to 1966. Of this subcategory, 123 (100 percent) were private.
    b. Liberal Arts Colleges II: this subcategory included all the liberal arts colleges that did not meet qualifications for inclusion in Liberal Arts Colleges I. In this group 449 (97.6 percent) were private colleges.

4. Two-Year Colleges and Institutions: in this group were all two-year colleges and institutions, including those that offer professional education. Of these, 238 (20.7 percent) were private colleges and institutions.
5. Professional Schools and Other Specialized Institutions: this included professional and specialized institutions such as theological seminaries, bible colleges, and other institutions offering degrees in religion (not including colleges with religious affiliations offering a liberal arts program as well as degrees in religion); medical schools and other separate health professional schools which were listed as separate campuses in the Education Directory: Colleges and Universities, 1976-77; schools of engineering and technology if they offered a bachelor's degree and had a program limited to technical fields of study; schools of business and management which awarded a bachelor's degree or a higher degree and had a program limited to business areas; schools of art, music, and design; schools of law; teacher's colleges; and other specialized institutions. This category contained 490 (87.5 percent) private schools and institutions.
6. Institutions for Nontraditional Study: this included three private schools or 50 percent of the total. (4:xii-xxi.)

APPENDIX II

DATA COLLECTION AND DATA SUMMARY FORMS

DATA COLLECTION FORM

NAME ______________________________

LOCATION ____________________ TYPE __________

GRANT SIZE

Grants ____________
Scholarships ____________
Fellowships ____________
Matching gifts ____________
Loans ____________
TOTAL ____________

ASSET SIZE

Outstanding Liabilities ____________
Assets ____________
TOTAL ____________

Grant Amount	Purpose	Check if for M.Y.	Institution	State	Type	Check if Black

DATA SUMMARY FORM: GEOGRAPHICAL ORIENTATION

NAME ______________________________

LOCATION ____________________ ORIENTATION ____________________

	REC. LOC.	
	State	Region
1. Middle Atlantic		
N.Y.		
N.J.		
PA		
2. East No. Central		
Ohio		
Ind.		
Ill.		
Mich.		
Wisc.		
3. West So. Central		
Ark.		
LA		
OK		
TX		
4. Pacific		
Wash.		
Ore.		
CA		
Hawaii		
5. So. Atlantic		
Del.		
MD		
D.C.		
VA		
W.VA.		
N.C.		
S.C.		
GA		
FL		

	REC. LOC.	
	State	Region
6. West No. Central		
Minn.		
Iowa		
MO		
Neb.		
Kansas		
7. New England		
Maine		
NH		
VT		
Mass.		
RI		
CT		
8. Mountain		
Idaho		
Montana		
N.D.		
WY		
S.D.		
CO		
NM		
Ariz.		
UT		
NV		
9. East So. Central		
KY		
TN		
AL		
Miss.		

DATA SUMMARY FORM: INDIVIDUAL FOUNDATION GRANT RANGES

NAME ______________________________ LOCATION ______________________________

GRANT RANGE CODE

1. $ 1,000 - 14,999
2. $15,000 - 24,999
3. $25,000 - 49,999
4. $50,000 - 99,999
5. $100,000 - 499,999
6. $500,000 - 999,999
7. $1 million and over

	Number							Total Dollar							Average						
TYPE OF INSTITUTION	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Research																					
Doctoral-Granting																					
Comprehensive																					
Liberal Arts																					
Two-Year																					
Public																					
Predominantly Black Inst.																					

APPENDIX III

FOUNDATIONS INCLUDED IN STUDY

FOUNDATIONS INCLUDED IN STUDY

Abelard Foundation, NY
Acme Cleveland Foundation, OH
Alcoa Foundation, PA
Alfond (Harold) Trust, ME
Allen-Heath Memorial Foundation, IL
Allied Chemical Foundation, NY
Alliss (Charles and Ellora) Educational Foundation, MN
Allyn Foundation, NY
Andrews Foundation, OH
Atkinson Foundation, CA
Austin Memorial Foundation, OH
Baird Foundation, NY
Baldwin (Summerfield), Jr. Foundation, MD
Ball (George and Francis) Foundation, IN
Bank of America Foundation, CA
Bayne (Howard) Fund, NY
Bechtel Foundation, CA
Beech Aircraft Foundation, KS
Beecher (Ward) Foundation, OH
Beeghly (Leon A.) Fund, OH
Beidler (Francis) Charitable Trust, IL
Beinecke (Edwin J.) Trust, CT
Belfer Foundation, NY
Bell (James F.) Foundation, MN
Bemis Company Foundation, MN
Berry (Lowell) Foundation, CA
Blackmer (Henry M.) Foundation, NY
Blandin (Charles K.) Foundation, MN
Blank (Samuel) and Family Foundation, FL
Blum-Kovler Foundation, IL
Bodman Foundation, NY
Boehm (Lillian) Foundation, NY
Boston Foundation, MA
Bremer (Otto) Foundation, MN
Brockway Glass Company Foundation, PA
Brookdale Foundation, NY
Brown (George Warren) Foundation, MO
Bryan Family Foundation, NC
Bundy Foundation, MI
Burden (Florence V.) Foundation, NY
Burnham (Alfred G.) Donor Fund, NY
Bush (Edythe) Charitable Foundation, FL
Bydale Foundation, NY
Cabot-Saltonstall Charitable Trust, MA
California Foundation for Biochemical Research, CA
Callister (Louise E.) Foundation, UT
Campbell Soup Fund, NJ
Campe (Ed Lee and Jean) Foundation, NY
Carborundum Charitable Foundation, NY
Carnahan-Jackson Foundation, NY
Carnegie Corporation of New York, NY

Carthage Foundation, PA
Cary (Mary Flagler) Charitable Trust, NY
Chait (Sara) Memorial Foundation, NY
Cheney (Ben B.) Foundation, WA
Cincinnati Milacron Foundation, OH
Clark Foundation, NY
Cleveland Cliffs Foundation, OH
Cockrell Foundation, TX
Cohen (A.B., Dolly, and Ralph) Foundation, OH
Collins (Merle) Foundation, TX
Commerce Foundation, MO
Commercial Credit Companies Foundation, MD
Continental Corporation Foundation, NY
Corbett Foundation, OH
Cowles (Gardner and Florence Call) Foundation, IA
Cowles (Harriett Cheney) Foundation, WA
Cowles (John and Elizabeth Bates) Foundation, MN
Cowles (William H.) Foundation, WA
Crabtree, Trustees Under the Will of Lotta M., MA
Crown Zellerback Foundation, CA
Cyclops Foundation, PA
Danforth Foundation, MO
De Porres (Martin) Foundation, PA
De Rance, Inc., WI
De Vlieg (Charles B.) Foundation, MI
Dietrich (Daniel W.) Foundation, PA
Dodge (Cleveland H.) Foundation, NY
Doheney (Carrie Estelle) Foundation, CA
Dolfinger-McMahon Foundation, PA
Dougherty (James R.), Jr. Foundation, TX
Dula (Caleb C. and Julia W.) Educational and Charitable
   Foundation, NY
Dunspaugh-Dalton Foundation, FL
Dye (F.W. and Bessie A.) Foundation, TX
Eagle-Picher Foundation, OH
Eccles (George S. and Dolores Dore) Foundation, UT
Educational Foundation of America, CT
Emery (Thomas J.) Memorial, OH
England (Frank W.) Foundation, IL
Evans (Thomas J.) Foundation, OH
Evans (T. M.) Foundation, NY
Farish (William Stamps) Fund, TX
Fasken Foundation, TX
Ferkauf (Eugene and Estelle) Foundation, NY
Fidelity Foundation, MA
Fieldcrest Foundation, NC
Firestone Trust Fund, OH
First Pennsylvania Charitable Foundation, PA
Fischel (Harry and Jane) Foundation, NY
Fleischmann (Max C.) Foundation, NV
Fleming Foundation, TX
Ford Foundation, NY
Ford Motor Company Fund, MI
Ford (William and Martha) Fund, MI

Forest Lawn Foundation, CA
Foundation for the Needs of Others, NY
French (D.E.) Foundation, NY
Freund (Erwin O. and Rosalind H.) Foundation, IL
Frick (Henry C.) Educational Commission, PA
Frost (Meshech) Testamentary Trust, OH
Gardner Foundation, OH
Gebhard-Gourgaud (Eva) Foundation, NY
Giant Food Foundation, DC
Goldman (William P.) and Brothers Foundation, NY
Grainger Foundation, Inc., IL
Grant (William T.) Foundation, NY
Green Fund, NY
Greer (Josephine Lauter) and Philip Lauter Foundation, CT
Gulf and Western Foundation, NY
Haas (Saul and Dayee G.) Foundation, WA
Halper (Louis M. and Birdie) Foundation, CA
Hammer (Armand) Foundation, CA
Hancock (Luke B.) Foundation, CA
Hanes (James G.) Memorial Fund, NC
Harnischfeger Foundation, WI
Hayden (Charles) Foundation, NY
Hazen (Lita) Charitable Trust, PA
Hecht-Parents' Magazine Foundation for Child Welfare, NY
Heinz (H.J.) Company Foundation, PA
Heller (Walter E.) Foundation, IL
Henderson (Cassandra Mellon) Foundation, PA
Herbst Foundation, CA
Herndon (Alonzo F. and Norris B.) Foundation, GA
Hewlett (William and Flora) Foundation, CA
Hilton (Conrad N.) Foundation, CA
Hogan (O.T.) Family Foundation, IL
Hood (Gilbert H.) Memorial Fund, MA
Huber Foundation, NJ
Hudson-Webber Foundation, MI
Huston Foundation, PA
Hyde (Lillia Babbitt) Foundation, NJ
ITT Rayonier Foundation, NY
Ingalls Foundation, AL
International Harvester Foundation, IL
Irving One Wall Street Foundation, NY
Jenkins (George W.) Foundation, FL
Jergens (Andrew) Foundation, OH
Jewel Foundation, IL
Johnson and Johnson Associated Industries Fund, NJ
Johnson (M.G. and Lillie A.) Foundation, TX
Joslyn (Marcellus L.) Foundation, CA
Kellogg (W.K.) Foundation, MI
Kendall (Henry P.) Foundation, MA
Kevorkian Foundation, NY
Keystone Consolidated Industries Charitable Trust, IL
Kidder Peabody Foundation, NY
Kirby (F.M.) Foundation, NJ

Klingenstein (Esther A. and Joseph) Fund, NY
Knox (Seymour H.) Foundation, NY
Krause (Charles A.) Foundation, WI
Kresge Foundation, MI
Kroger Company Charitable Trust, OH
LBJ Family Foundation, TX
Ladish (Herman W.) Family Foundation, WI
Laros (R.K.) Foundation, PA
Lauder Foundation, NY
Lear Siegler Foundation, CA
Lever Brothers Company Foundation, NY
Levy (Blanche P.) Foundation, PA
Lilly Endowment, IN
Lincoln National Life Foundation, IN
Lippman Schnurmacher Fund, NY
Loridans (Charles) Foundation, GA
Lund (Russell T.) Charitable Trust, MN
Lurie (Louis R.) Foundation, CA
Mabee (J.E. and L.E.) Foundation, OK
Manufacturers and Traders Trust Company Foundation, NY
Marmot Foundation, DE
Mathis-Pfohl Foundation, NY
May Stores Foundation, MO
Maytag Company Foundation, IA
McAshan Educational and Charitable Trust, TX
McBean (Atholl) Foundation, CA
McCormick (Chauncey and Marion Deering) Foundation, IL
McCormick (Robert R.) Charitable Trust, IL
Merrion Foundation, IL
Meyer (Aaron and Rachel) Memorial Foundation, NJ
Michael (Barbara and Clifford) Foundation, NY
Miller (Albert L. and Louise B.) Foundation, MI
Miller (Stanley O.) Charitable Fund, MI
Mitrani Family Foundation, NY
Moorman Company Fund, IL
Morehead (John Motley) Foundation, NC
Mostyn Foundation, NY
Murphy Foundation, AK
NCR Foundation, OH
NL Industries Foundation, NY
Nevil (George W.) Trust, PA
Newhouse (Samuel I.) Foundation, NY
Newspaper Fund, NJ
Nordson Foundation, OH
Norgren (Carl A.) Foundation, CO
Northern Star Foundation, MN
Northern Trust Company Charitable Trust, IL
Northwest Area Foundation, MN
Norton Company Charitable Trust, MA
Noyes (Nicholas H.), Jr. Memorial Foundation, IN
O.C.F. Foundation, NY
Olin Corporation Charitable Trust, CT
O'Neil (W.) Foundation, OH
Orleton Trust Fund, CA

Pardee (Elsa U.) Foundation, MI
Parten Foundation, TX
Parvin (Albert) Foundation, CA
Payne Fund, OH
Peat, Marwick, Mitchell Foundation, NY
Perkins (Joe and Lois) Foundation, TX
Phelps Dodge Foundation, NY
Phillips (Dr. P.) Foundation, FL
Phillips Foundation, CA
Phillips Petroleum Foundation, OK
Post (Marjorie Merriweather) Foundation of D.C., DC
Presto Foundation, WI
Public Welfare Foundation, DC
Putnam Foundation, NH
Rahr Foundation, WI
Raskob Foundation for Catholic Activities, DE
Richardson (Grace) Fund, NC
Richardson (Smith) Foundation, NC
Rittenhouse Foundation, PA
Ritter Foundation, NY
River Branch Foundation, FL
Roblee (Joseph H. and Florence A.) Foundation, MO
Roche (Edward and Ellen) Relief Foundation, NY
Rockefeller Foundation, NY
Romill Foundation, NY
Rubinstein (Helena) Foundation, NY
Rudin (Louis and Rachel) Foundation, NY
Sachs Fund, MO
Sandoz Foundation of America, NY
Santa Claus Samaritans, IN
Schiff Foundation, NY
Schmidt (Marjorie Mosher) Foundation, CA
Scholl (Dr.) Foundation, IL
Schoonmaker (Lucy Kay) Foundation, PA
Schwartz (Bernard Lee) Foundation, DE
Seuss (Dr.) Foundation, CA
Seymour and Troester Foundation, MI
Shapiro Brothers Charitable Foundation, MD
Share (Charles Morton) Trust, OK
Skogmo (P.W.) Foundation, MN
Sloan (Alfred P.) Foundation, NY
Smyth (Marion C.) Trust, NH
Southern Education Foundation, GA
Speas (Victor E.) Foundation, MO
Spencer Foundation, IL
Sprague (Caryll M. and Norman F.) Foundation, CA
Springs (Elliott White) Foundation, SC
Stackpole-Hall Foundation, PA
Stauffer (John and Beverly) Foundation, CA
Staunton Farm, PA
Stebbins Fund, NY
Stein (Joseph F.) Foundation, NY
Steinman (John Frederick) Foundation, PA

Stern (Percival) Foundation, LA
Stewart-Warner Foundation, IL
Stiemke (Walter and Olive) Foundation, WI
Stony Wold Herbert Fund, NY
Strong (Hattie M.) Foundation, DC
Stuart (C.H.) Foundation, NY
Stulsaft (Morris) Foundation, CA
Sunnen Foundation, MO
Swisher (Carl S.) Foundation, FL
Tait (Frank M.) Foundation, OH
Tanner (Obert C. and Grace A.) Foundation, UT
Texas Educational Association, TX
Tektronix Foundation, OR
Thille (Albert) Foundation, CA
Times Mirror Foundation, CA
Toms Foundation, TN
Trull Foundation, TX
Trust Company of Georgia Foundation, GA
Tudor Foundation, NY
Uniroyal Foundation, NY
United States Steel Foundation, PA
Vogt (Henry) Foundation, KY
Waggoner (E. Paul and Helen Buck) Foundation, TX
Walker (T.B.) Foundation, CA
Wallach (Miriam and Ira D.) Foundation, NY
Warner (David) Foundation, AL
Warner (Marvin L.) Foundation, OH
Wehr (Todd) Foundation, WI
Weiler (F.) Charity Fund, NY
Werthan Foundation, TN
West Foundation, TX
Western Gear Foundation, CA
Weyerhaeuser (Charles A.) Memorial Foundation, MN
White (G.R.) Trust, TX
Whitehall Foundation, FL
Whiting (Macauley and Helen Dow) Foundation, MI
Whittenberger (Claude R. and Ethel B.) Foundation, ID
Wickes (Harvey Randall) Foundation, MI
Wilcox (G.N.) Trust, HI
Williams (Arthur Ashley) Foundation, MA
Winn-Dixie Stores Foundation, FL
Wisconsin Public Service Foundation, WI
Wodecroft Foundation, OH
Wolfson Family Foundation, FL
Woodson (Aytchmonde) Foundation, WI
Woodson (Margaret C.) Foundation, NC
Wunsch Foundation, NY
Ziegler Foundation, WI

BIBLIOGRAPHY

1. Abernathy, James W. and Kiritz, Norton J. "Private Foundations and Public Information," *The Grantsmanship Center News*, 5 (April/May 1974): 14-20.

2. American Association of Fund-Raising Counsel, Inc. *Giving USA: 1976 Annual Report*. New York: American Association of Fund-Raising Counsel, Inc., 1976.

3. ________. *Giving USA: 1973 Annual Report*. New York: American Association of Fund-Raising Counsel, Inc., 1973.

4. Bell, Dorothy Eileen. "A Phoenix in Our Midst: the Carnegie Foundation for the Advancement of Teaching and Its Relationship to American Higher Education, 1950-1970." Ph.D. Dissertation, University of Illinois at Urbana-Champaign, 1972.

5. Blount, Lawanna Lease. "Contributions of Selected Private Philanthropic Foundations for Higher Education Administration, 1966-1975." Ph.D. Dissertation, University of Wisconsin-Madison, 1978.

6. Breneman, David W., and Finn, Chester E., Jr., eds. *Public Policy and Private Higher Education*. Washington, D.C.: Brookings Institution, 1978.

7. Broce, Thomas Edward. "A Study of Oklahoma-Based Private Philanthropic Foundations and Their Impact on Higher Education in Oklahoma." Ph.D. Dissertation, University of Oklahoma, 1970.

8. Carnegie Commission on Higher Education. *A Classification of Institutions of Higher Education*. Berkeley, Calif.: Carnegie Foundation for the Advancement of Teaching, 1976.

9. Chairman and Staff. Council on Foundations, Inc. "Private Foundations and the 1969 Tax Reform Act." In Commission on Private Philanthropy and Public Needs. *Research Papers*. *Vol. 3: Special Behavioral Studies, Foundations, and Corporations*, pp. 1557-1661. Dept. of the Treasury, 1977.

10. Cheatham, Roy Edward. "A Study of Financial Support Provided by Selected Private Foundations to Historically Black Colleges and Universities." Ph.D. Dissertation, St. Louis University, 1975.

11. Cheit, Earl F. and Lobman, Theodore E. III. "Private Philanthropy and Higher Education: History, Current Impact, and Public Policy Considerations." In Commission on Private Philanthropy and Public Needs. *Research Papers. Vol. II: Philanthropic Fields of Interest*, *Part 1.*, pp. 453-513. Dept. of the Treasury, 1977.

12. Colvard, Richard and Bennett, Andre M. *Patterns of Concentration in Large Foundations' Grants to U.S. Colleges and Universities*. Iowa City: American College Testing Program, 1974.

13. Commission on Private Philanthropy and Public Needs. "Commentary on Commission Recommendations." In *Research Papers. Vol. 1: History, Trends, and Current Magnitudes*., pp. 3-47. Dept. of the Treasury, 1977.

14. ________. *Giving in America: Toward a Stronger Voluntary Sector*. Commission on Private Philanthropy and Public Needs, 1975.

15. Council for Financial Aid to Education. *Voluntary Support of Education 1976-77*. New York: Council for Financial Aid to Education, 1978.

16. ________. *Voluntary Support of Education 1975-76*. New York: Council for Financial Aid to Education, 1977.

17. ________. *Voluntary Support of Education 1972-73*. New York: Council for Financial Aid to Education, 1974.

18. Council of Michigan Foundations and Michigan League for Human Services. *Michigan Foundation Directory Edition II*. Lansing, Mich.: Michigan League for Human Services, 1978.

19. Council on Foundations. *Annual Report 1977/78*. New York: Council on Foundations, Inc., 1978.

20. ________. "Foundation Tax Now 2%." *Reporter*, VII (November 1978):1.

21. Dane, John Hunter. "An Analysis of the Trends of Financial Support by Philanthropic Foundations to General Programs in U.S. Higher Education. 1955-1970." Ph.D. Dissertation, University of Pittsburgh, 1974.

22. Duffey, Joseph. "A Background Paper on Education." *Academae*, March 1976, pp. 1-4.

23. Ford Foundation. *Annual Report, 1977*. New York: Ford Foundation, 1978.

24. Foundation Center. *The Foundation Center National Data Book, 1974-76*, 2 vols. New York: Foundation Center, 1977.

25. ________. *The Foundation Directory*, 6th ed. Edited by Marianna O. Lewis. Introduction by Thomas R. Buckman. New York: Foundation Center, 1977.

26. ________. *The Foundation Grants Index, 1977*. New York: Foundation Center, 1978.

27. ________. *The Foundation Grants Index, 1976*. New York: Foundation Center, 1977.

28. ________. *The Foundation Grants Index, 1975*. New York: Foundation Center, 1976.

29. ________. *The Foundation Grants Index, 1970-71*. New York: Foundation Center, 1972.

30. ________. Xeroxed information from The Foundation Grants Data Bank. New York: Foundation Center, 1973.

31. Gallagher, James P. "The Effect of Selected Variables on the Financial Development of Jesuit Institutions of Higher Education in America." Ph.D. Dissertation, Catholic University of America, 1975.

32. Havighurst, Robert J.; Holsinger, Donald B.; and Lunde, Erik S. *Education and Major Philanthropic Foundations*. Report to the National Academy of Education, 1976.

33. Howe, Barbara. "The Emergence of the Philanthropic Foundation as an American Social Institution, 1900-1920." Ph.D. Dissertation, Cornell University, 1976.

34. Humphrey, Dorothy Jacqueline Turnley. "A Study of the Interest of Philanthropic Foundations in Grants for Health Education and Physical Education to Colleges and Universities Granting Degrees in Health Education and Physical Education, 1953-1964." Ed.D. Dissertation, George Peabody College for Teachers, 1966.

35. Ishoy, Victor A. "Fund Raising, A Function of Development in Financing Higher Education." Ed.D. Dissertation, Brigham Young University, 1972.

36. Jenney, Hans H. and Allan, Mary Ann. "Philanthropy In Higher Education: Its Magnitude, Its Nature, and Its Influence on College and University Financing." In Commission on Private Philanthropy and Public Needs. *Research Papers. Volume II: Philanthropic Fields of Interest, Part I*, pp. 513-593. Dept. of the Treasury, 1977.

37. Kolenda, Michael S.; Borque, Daniel; and Smith, Randall. "Foundations and the Federal Government: A Look at Spending Patterns." In Commission on Private Philanthropy and Public Needs. *Research Papers*. *Vol. III: Special Behavioral Studies, Foundations, and Corporations*, pp. 1679-1688. Dept. of the Treasury, 1977.

38. Lawson, William Ben. "Foundations and Private Institutions of Higher Education: A Merging of Interests or a Parting of the Ways." Ph.D. Dissertation. Arizona State University, 1975.

39. Margolis, Judith B. *About Foundations: How to Find the Facts You Need to Get a Grant*. New York: The Foundation Center, 1975.

40. Meyer, James Dean. "A Study of Fund-Raising Programs at Selected Institutions of Higher Education in the United States." Ed.D. Dissertation, University of Wyoming, 1971.

41. Michael, John A. and Turner, William H. *Listing of Traditionally and Predominantly Black Institutions by State: 1976*. 1978. (Unpublished report prepared for the National Center for Education Statistics).

42. Minter, W. John and Bowen, Howard R. *Independent Higher Education: Fourth Annual Report on Financial and Educational Trends in the Independent Sector of American Higher Education*. Washington, D.C.: National Association of Independent Colleges and Universities, 1978.

43. Nason, John W. Trustees and the Future of Foundations. New York: Council on Foundations, 1977.

44. National Commission on the Financing of Postsecondary Education. Financing Postsecondary Education in the United States. Washington, D.C.: Government Printing Office, 1973.

45. Nie, Norman H.; Hull, C. H.; Jenkins, J. G.; Steinbrenner, K.; and Bent, D. H. SPSS: Statistical Package for the Social Sciences, 2nd ed. New York: McGraw-Hill, 1975.

46. Nielsen, Waldemar. The Big Foundations. New York: Columbia University Press, 1972.

47. Perrote, Ronald James. "Fund Raising in Higher Education in the United States with Special Reference to Selected Institutions in the State of Michigan." Ph.D. Dissertation, Michigan State University, 1974.

48. Pickett, William Lee. "An Assessment of the Effectiveness of Fund Raising Policies on Private Undergraduate Colleges." Ph.D. Dissertation, University of Denver, 1977.

49. Rooks, Charles S. Foundation Philanthropy in the Southeast. Atlanta, Georgia: Southeastern Council of Foundations, 1977.

50. _______. "Southeastern Grant Making." Foundation News, 19 (Sept/Oct. 1978): 31-37.

51. Sherratt, Gerald Robert. "A Study of the Methods and Techniques Used in Fund-Raising at Selected Public Universities." Ph.D. Dissertation, Michigan State University, 1975.

52. Smith, Hayden. Vice President and Director of Research, Council for Financial Aid to Education. Telephone Conversation, 13 September 1978.

53. Smith, William H. and Chiechi, Carolyn P. Private Foundations: Before and After the Tax Reform Act of 1969. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1974.

54. Szczypkowski, Ronald Benjamin. "Participation of Philanthropic Foundations in Continuing Professional Education (CPE)." Ed.D. Dissertation, Columbia University, 1971.

55. Twentieth Century Fund. Task Force on College and University Endowment Policy. _Funds for the Future_. Background paper by J. Peter Williamson. Foreward by M. J. Rossant. New York: McGraw-Hill Book Co., 1975.

56. U.S. Dept. of Health, Education, and Welfare. National Center for Education Statistics. _Digest of Education Statistics, 1977-78_. Washington, D.C.: Government Printing Office, 1978.

57. ________. National Center for Education Statistics. _Digest of Education Statistics_, 1976 ed. Washington, D.C.: Government Printing Office, 1977.

58. ________. _Digest of Education Statistics_, 1974 ed. Washington, D.C.: Government Printing Office, 1975.

59. ________. _Digest of Education Statistics_, 1973 ed. Washington, D.C.: Government Printing Office, 1974.

60. ________. _Digest of Education Statistics_, 1972 ed. Washington, D.C.: Government Printing Office, 1973.

61. ________. _Digest of Education Statistics_, 1971 ed. Washington, D.C.: Government Printing Office, 1972.

62. White, Virginia P. _Grants: How to Find Out About Them and What to Do Next_. New York: Plenum Press, 1975.

63. Zurcher, Arnold L. and Dustan, Jane. _The Foundation Administrator_. New York: Russell Sage Foundation, 1972.

VITA

Helen Judith Jarrell received the B.A. in psychology in 1956 from Northwestern University. She received the M.Ed. from Xavier University (Ohio) in 1961 and the M.L.S. from the University of Maryland in 1968. The Ph.D. was earned from Walden University in 1979.

Ms. Jarrell currently is the Director of Development at Capitol Institute of Technology. She also has served as Library Director of the College's library. She serves on the Board of Directors of an energy development corporation in Eastern Kentucky. Memberships include the Special Libraries Association and the Librarian's Committee of the Maryland Independent Colleges and Universities Association. She has served on the Library Council of the Metropolitan Washington Council of Governments and is a Certified Medical Librarian. She is a member of Phi Beta Kappa and Beta Phi Mu.

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